

Figure 1A
Figure 1B
Figure 1C
Figure 1D
Figure 1E
Figure 1F
Figure 1G
Figure 1H

Figure 1

Figure 3A
Figure 3B
Figure 3C
Figure 3D
Figure 3E
Figure 3F
Figure 3G

Figure 3

Figure 5A
Figure 5B
Figure 5C
Figure 5D
Figure 5E
Figure 5F
Figure 5G

Figure 5

Figure 2A
Figure 2B
Figure 2C
Figure 2D
Figure 2E
Figure 2F

Figure 2

Figure 4A
Figure 4B
Figure 4C

Figure 4

2/52

Figure 1A

3/52

Figure 1B

4/52

401	TCTCTGGAA	AGCAGATAAA	GTTGCCAAAAA	GAGCTGTAGT	CGTTGGCTGT	450
OSESPSPS_Nat	.T..:..A..	...G..:..:..	..A..:..C..	.C..A..:..G..	..T..A..:..T..:	
OSESPSPS_AT	..GAGC..T..	.G..T..C..:..	..G..C..:..GC	...A..C..:..GC	..A..G..:..A..C	
OSESPSPS_ZM						
451						
500	GGTGGCAAGT	TTCCCTGTTGA	GAAGGGATGCG	AAAGAGGAAG	TGCCAACTCTT	500
OSESPSPS_Nat	...G....	.C..A..:..	A..:..:..T	..G..A..:..	.A..G..:..	
OSESPSPS_AT	..C..T....	.C..A..:G..	...A..C..:C	...A..G..	.T...T.G..	
OSESPSPS_ZM						
501						
550	CTTGGGAAC	GCTGGAAATCG	CAATGGGATC	CTTGACAGCA	GCCGTGACTG	550
OSESPSPS_Nat	TC.C...:..T	..C..:G..:..	.C..:..GAG	T...:..T..T	..G..:C..:A..	
OSESPSPS_AT	...A...:..	...C..:..C..:..	...A..:AG	.C..:..T..C	..G..:C..:..	
OSESPSPS_ZM						
551						
600	CTGCTGGTGG	AAATGCAACT	TATGTCCTTG	ATGGAGTGCC	ACGAATTGAGG	600
OSESPSPS_Nat	..C..:..A..:	C..:C..:..A..	..C..:C..:A..	..C..:G..:..	..G..:..	
OSESPSPS_AT	..C..:..A..:	T..C..:..	..C..:C..:G..	..C..:T..T..	..G..:C..:C..	
OSESPSPS_ZM						

Figure 1C

5/52

601 OSEPSPS_Nat GAGAGACCGA TTGGTGA^CT GGTTGTCGGG TTGAAACAAAC TTGGTGC^GGA
650 OSEPSPS_AT ...C.T...T.TC. T..C..A..T C.C..G.... C..C..T..
OSEPSPS_ZM .AC....C. .C....TC. C..G..A..A C.T.....T .G..A..C..

651	OSEPSPS_Nat	TGTCGACTGT	TTCCTTGCA	CTGAATGCC	ACCTGTTCGT	GTCAAGGGAA
	OSEPSPS_AT	C..A..T...	....G..T.	....G..T..	G..A..CA..A	.T...A.....
	OSEPSPS_ZM	...A..T...	...T.G..G.	.A..G....	T..A..G..G	.A.....C.

OSEPSPS_Nat	TTGGAGGGACT	TCCTGGTGGC	AAGGTTAAC	TCTCTGGTTC	CATCAGCAGT
OSEPSPS_AT	C..T..G..	G..G..C..A	.....C..	..G..G..CAG	T..TTCG...
OSEPSPS_ZM	C..G..T..	C..A..C..A	....G..T	..A..A..GAG	T..TC..TCG

OSEPSPS_Nat	CAGTACTTGA	GTGCCCTTGCT	GATGGCTGCT	CCTTTGGCCC	TTGGGGATGTC
OSEPSPS_AT	.....TC..TT	C...TC..C..	.....G	..A..A..TT	.G..A..C..
OSEPSPS_ZM	....C..CT	CC..GC..T.	....A..A	..AC..GT	.G..C..C..

Figure 1D

6/52

801 0sEPSPS_Nat 0sEPSPS_AT 0sEPSPS_ZM	GGAGATCGAA T.....G T..A..T... .....T...C...	ATCATTGACA....T. ....T.C... ....G..C...	AACTAATCTC....T.A.. ....G..C..A.. ....C..G..T	CATTCCCTAC T...C..G..T....C..G..T....C..G..T	GTGAAATGA....C..G... ....C..G... ....G..G...	850
851 0sEPSPS_Nat 0sEPSPS_AT 0sEPSPS_ZM	CATTGAGATT .T..A..C. .C..C.GC.	GATGGAGCGT T..A..G....AA.A	TTTGGGTGTGA....G..T. ....A..A...	AGGCAGAGCA....C... ....A..T..A..	TTCTGATAGT....AGC..C.. ....AG...CTC.	900
901 0sEPSPS_Nat 0sEPSPS_AT 0sEPSPS_ZM	TGGGACAGAT....TC.T. ....TC.G.	TCTATATAA....C..A.. ....C..C..	GGGAGGGCAG....C... ....C..A..	AAGTACAAAT....T..G.. ....A..T..GA	CTCCTGGAAA....G.. ....G..A..C..	950
951 0sEPSPS_Nat 0sEPSPS_AT 0sEPSPS_ZM	TGCCCTATGTT ...T...A ...G...C..G	GAAGGTGATG....G... ....G..C..	CCTCAAGCGC....T..TCT.. ....TTTC...	GAGCTATTTC....C.. ....C...	TTGGGCTGGTG....C.T..G..A.. ....A..C..	1000

Figure 1E

7/52

1001	OSEPSPS_Nat	CTGCAATCAC	TGGAGGCCACT	GTGACAGTTTC	AAGGTTGTGG	TACGACCAGT	1050
	OSEPSPS_AT	.G..T...A...	.....A..A	....C.....	....G..C..C..	....A..A..A..	
	OSEPSPS_ZM	.A..T..T..	C.....T...	....T.....	....G..	....G..G....	A..A..G..C

1051	OSEPSPS_Nat	TTGCAGGGTG	ATGTCAAATT	TGCTGAGGTA	CTTGAGATGA	TGGGAGCAAA
	OSEPSPS_AT	...A...C...	C..G..G..	...C...	...A...	...T..C..
	OSEPSPS_ZM	C...A..C.	.C..A..G..	C..A..A..C	...A..	C..T..

1101 OSEPSPS_Nat GGTACATGG ACTGACACCA GTGTAACCGT AACTGGTCCA CCACGTGAGC
1150 OSEPSPS_AT A..A..G...A..A..AT CG..G..A..T.....T ..A..A..
OSEPSPS_ZM ...G..T...A..T..GT CA..C...C..G..T ..T..G..A..

1151 OsEPSPS_Nat CTTATGGAA GAAACACCTG AAAGCTGTTG ATGTCAACAT GAACAAAATG
 1200 OsEPSPS_AT ...C..C.. A..G..T..T ..G..C..G.. ...T..T..T.. . .T..G...
 OsEPSPS_ZM .C..C..T.. . . .T.. . .G..A..G.. C..G.. . .T..G...

Figure 1F

8/52

1201	OSEPSPS_Nat	CCTGATGTTG	CCATGACCCCT	TGCCCGTTGTT	GCACTCTTCG	CTGATGGTCC
	OSEPSPS_AT	...C....	.T....A..	...C....	.C..T..T..	.A..C...C..
	OSEPSPS_ZM	..A..C....	.G.....	C..A..A..C	..T..G....	.A..C..A..
1251	OSEPSPS_Nat	AACTGCTATC	AGAGATGTGG	CTTCCTGGAG	AGTAAAGGAA	ACCGAAAGGA
	OSEPSPS_AT	...G...G..A	C..C....T..	.A..A....C.	C..C....	..G...G..G..
	OSEPSPS_ZM	T..C....T	.G..C..T..	.AGT....	G..C....G	.T..G..A..
1301	OSEPSPS_Nat	TGGTTGCAAT	TCGGACCGAG	CTAACAAAGC	TGGGAGGCATC	GGTTGAAGAA
	OSEPSPS_AT	...G..T..	...A..T..A	..C..C..A..	.T..T..C..	..T..A..G..G..
	OSEPSPS_ZM	....C..T..	C..C....A	..T..G..A..	.C..T...AG	C..G..G..
1351	OSEPSPS_Nat	GGTCTCTGACT	ACTGCATCAT	CACCCCCCG	GAGAAAGCTGA	ACATCACGGG
	OSEPSPS_AT	..C....T..	....T....	T..A..C..T	....A..T..	....T..T..
	OSEPSPS_ZM	....A...	....	A..G..T..C	....A..A..	....A..C..

Figure 1G

9/52

1401 OSEPSPS_Nat OSEPSPS_AT OSEPSPS_ZM	AATCGACACC T..T..T..A T..A...T	TACGATGATC.....C.....C. .....C.....C.	ACAGGATGGC .T..A.....A.. .....A....A..	CATGGCCTTC T.....T... G.....G...	1450 TCCCTCGCTG ...A..G..C. ...G.....A..
1451 OSEPSPS_Nat OSEPSPS_AT OSEPSPS_ZM	CCTGCGCCGA .T..T..A... .G.....G..	CGTGCCCCGTG .T...T..C....T..G..T	ACGATCAGGG .A...A.. ....T..A..	ACCCCTGGTTG .T...C.. ....G..	1500 CACCCGCCAAG T..TA..A... ....T..T..A..
1501 OSEPSPS_Nat OSEPSPS_AT OSEPSPS_ZM	ACCTTCCCCA ..G.....G.. ..T...T..	ACTACTTCCA....T.. ....T..	CGTTCTAAC T.....T.. T.....T..	ACTTTCGTCA ..A...C.. ..C..T..	1548 GGAACCTGA C.C...C.. .C..T..

Figure 1H

10/52

ZmEPSPS_Nat	ATGGCGGCCA	TGGCGACCAA	GGCCGCCGCC	GGCACCCGTGT	CGCTGGACCT	50
ZmEPSPS_ZM	.....T.	....C..G..	...A..G..C	..T..A..AA	GC..C..TT.	
51	CGCCGCCCG	TCCGCCGCC	ACCACCGCCC	GAGCTCGGCC	CGCCCCGCC	100
ZmEPSPS_Nat	G..G..C..C	..C..TA.G.	....G..	A...AGT..	A.G..A..G.	
ZmEPSPS_ZM						
101	TCCGCCCGC	CGTCCGGGG	CTGCCGGGCC	CTGGGCCCG	CGTGATCGCC	150
ZmEPSPS_Nat	.A.G..A..	A..T....T	..TA.A....	....TA.AA.	G..T....A	
ZmEPSPS_ZM						
151	GGGCCGCCG	CGGGGCCAGC	GGCGGGGCCG	GTGCCAGGGG	GTGCCAGGG	200
ZmEPSPS_Nat	....A....	....T..C..	....A....	....C..	.C..G..A..	
ZmEPSPS_ZM						
201	GATCGTGCTG	CAGCCCCATCA	AGGAGATCTC	CGGCACCGTC	AAGCTGCCGG	250
ZmEPSPS_Nat	....C..A	....T....	....A....	....T..A..A	....T..A..A	
ZmEPSPS_ZM						

Figure 2A

11/52

251 ZmEPSPS_Nat ZmEPSPS_ZM	GGTCCAAGTC .CAG...AAG	GCTTTCCAAC T...AG...	CGGATCCTCC ...A....G.	TACTGCCGC .GT.G..G..	CCTGTCCGAG A..C..T..A	300
301 ZmEPSPS_Nat ZmEPSPS_ZM	GGGACAACAG....C..G.	TGGTTGATAA ..C..A....	CCTGCTAAC T.....C...	AGTGAGGATG ..C..A..C.	TCCACTACAT .G.....T..	350
351 ZmEPSPS_Nat ZmEPSPS_ZM	GCTGGGGCC T.T.G..T...	TTGAGGACTC C.....G..	TTGGTCTCTC .A....G..	TGTGAAAGCG A..G....C	GACAAAGCTG ..T..G..C..	400
401 ZmEPSPS_Nat ZmEPSPS_ZM	CCAAAAGAGC ...GC..C..	TGTAGTTGTT ...C..C...	GGCTGTGGTG....C..C..	GAAAGTTCCC .T.....C..	AGTTGAGGAT C..G.....C	450
451 ZmEPSPS_Nat ZmEPSPS_ZM	GCTAAAGAGG ..G.....A..	AAGTGCAGCT .G.....T..	CTTCTTGGGG A..TC.T...	AATGCTGGAA ..C.....C..	TCGCAATGCG....C.....C..	500

Figure 2B

12/52

501 ZmEPSPS_Nat ZmEPSPS_ZM Consensus	550 GTCCTTGACA GCAGCTGTTA CTGCTGCTGG TGAAATGCA ACTTACGTGC.....C.T..C .....C..C. .C.....G.. A..C..C... .....c.g..a .....c..c. .c.....g.. a..a..c...
551 ZmEPSPS_Nat ZmEPSPS_ZM	600 TTGATGGAGT ACCAAGAATG AGGGAGAGAC CCATTGGCGA CTTGGTTGTC....C..T.. T..TC.T... .A...C.G. ....A..G.. TC.C..C..G
601 ZmEPSPS_Nat ZmEPSPS_ZM	650 GGATTGAAGC AGCTTGGTGC AGATGTTGAT TGTTCCCTG GCACTGACTG ..GC..C.... .C..G.. C..C..... C....C. .A..C...
651 ZmEPSPS_Nat ZmEPSPS_ZM	700 CCCACCTGTT CGTGTCAATG GAATCGGAGG GCTACCTGGT GGCAAGGTCA ...C.....G A.G..G..C. .C.....G.. A..G..A..A ..A...A...
701 ZmEPSPS_Nat ZmEPSPS_ZM	750 AGCTGTCTGG CTCCCATCAGC AGTCAGTACT TGAGTGCCTT GCTGATGGCT ..T....C.. ...A..TTC. TCG.....C ..C..T....G

Figure 2C

13/52

ZmEPSPS_Nat	GCTCCTTGG	CTCTGGGA	TGTGGAGATT	GAAATCATTG	ATAAATTAAAT	800
ZmEPSPS_ZM	..C...C...	....G..A..	C...C..A...	...G.....	....GC..G..	
801						
ZmEPSPS_Nat	CTCCATTCCG	TACGTCGAAA	TGACATTGAG	ATTGATGGAG	CGTTTTGGTG	850
ZmEPSPS_ZM	..T..C..T	..T..T..G..	....C..CC..	TC.....A	A.A..C..G..	
851						
ZmEPSPS_Nat	TGAAAGCAGA	GCATTCTGAT	AGCTGGGACA	GATTCTACAT	TAAGGGAGGT	900
ZmEPSPS_ZM	.C.....T..	....C..C...	TC.....	..G.....T..	C.....C..A	
901						
ZmEPSPS_Nat	CAAAAATACA	AGTCCCCCTAA	AAATGCCCTAT	GTTGAAGGGT	ATGCCTCAAAG	950
ZmEPSPS_ZM	..G.....T..	....A..G..	G.....G..C	..C..G..A..	.C..A..G..	
951						
ZmEPSPS_Nat	CGCAAAGCTAT	TTCTTGGCTG	GTGCTGCAAT	TACTGGAGGG	ACTGTGACTG	1000
ZmEPSPS_ZM	...G..T..C	...C.T..G..	.C.....C..	C..C..G..A	..C.....A..	

Figure 2D

14/52

ZmEPSPS_Nat	TGGAAGTTG	TGGCACCA	AGTTTGCAGG	GTGATG	GAA	GTTTGCTGAG	
ZmEPSPS_ZM	.....C..	...G..A..G	..C.....	..C..C..C..	A.....	.....
ZmEPSPS_Nat	GTACTGGAGA	TGATGGAGC	GAAGGTTACA	TGGACCGAGA	CTAGCGTAAC		1051
ZmEPSPS_ZM	..G..A..A..	.....C..	..T....G..T	.....T....	..GTC...G..		
ZmEPSPS_Nat	TGTTACTGGC	CCACCGCGGG	AGCCATTGG	GAGGAAACAC	CTCAAGGCCA		1101
ZmEPSPS_ZM	C.....G..A	..G..C..C..	.A..T..C..	..CC....G..T	..G..A.....		
ZmEPSPS_Nat	TTGATGTCAA	CATGAAACAAG	ATGCCTGATG	TCGCCATGAC	TCTTGCTGTG		1151
ZmEPSPS_ZM	.....G..	.....T...	.....G..C.	.....T....	.....A....C..		
ZmEPSPS_Nat	TTGCCCTCT	TTGCCGATGG	CCCGACAGCC	ATCAGAGACG	TGGCTCCTG		1201
ZmEPSPS_ZM	..G....G..	..C..T..C..	...C..C..A	....G..T..	..C...AGT..		

Figure 2E

15/52

ZmEPSPS_Nat	GAGAGTAAAG	GAGACCGAGA	GGATGGTTGC	GATCCGGACG	GAGCTAACCA	1300
ZmEPSPS_ZM	...G..C...	....A...C	.T.....C.	....G..	....A...	....G..T.
 1301						
ZmEPSPS_Nat	AGCTGGGAGC	ATCTGTTGAG	GAAGGGCCGG	ACTACTGCAT	CATCAGGCCG	1350
ZmEPSPS_ZM	.A...C..G..	CAG...G...	...G..C....	.T.....	A....A..T	
 1351						
ZmEPSPS_Nat	CCGGAGAAGC	TGAACGTGAC	GGCGATCGAC	ACGTTACGACG	ACCACAGGAT	1400
ZmEPSPS_ZM	...A.....T	....C..	C..T.....	..A.....	.T....C....	
 1401						
ZmEPSPS_Nat	GGCCCATGGCC	TTCTCCCCTG	CCGCCTGTGC	CGAGGTCCCC	GTCACCATCC	1450
ZmEPSPS_ZM	...A.....	..TAG.T.G..	.A..G..C..	...A..A..T	..G..T..AA	
 1451						
ZmEPSPS_Nat	GGGACCCCTGG	GTGGCACCCGG	AAGACCTTCC	CCGACTACTT	CGATGTGCTG	1500
ZmEPSPS_ZM	.A...T..A..	T.....C	..A..G..T.	....T..	....C..C..C	
 1501						
ZmEPSPS_Nat	AGCACCTTCG	TCAAAGAATTAA	A			1521
ZmEPSPS_ZM	TCA..C....	.G.....C.G	.			

Figure 2F

16/52

GmEPSPS_Nat	ATGGCCCAAG	TGAGCAGAGT	GCACAATCTT	GCTCAAAGCA	CTCAAATT	50
GmEPSPS_GM	....T..G.	.CTCTC.C..	T..T....C	....G..T.	.C..G..A..	
51	TGGCCATTCT	TCCAACCCA	ACAAACTCAA	ATCGGTGAAT	TCGGTTTCAT	100
GmEPSPS_Nat	C..A.....C	AGT.....A.	.....A..	G..T.....	AGT..A...C	
101	TGAGGCCACG	CCTTGGGG	GCCTCAAAT	CTCGCATCCC	GATGCATAAA	150
GmEPSPS_Nat	.TC....T..	G..G....A	..AAGT..GA	GC..T.....	T.....C..G	
151	AATGGAAGCT	TTATGGAAA	TTTTAATGTG	GGGAAGGGAA	ATTCCGGCGT	200
GmEPSPS_Nat	..C..TTCG.	.C.....G..	C....C..C	..C..A....	..C..A..T..	
201	TTTAAGGTT	TCTGCATCGG	TCGCCGCC	AGAGAACCG	TCAAACGTCGC	250
GmEPSPS_GM	C..C..A..A	AGC..CAGC.	.A..T..G..	T.....C	AGT..T..T..	

Figure 3A

17/52

251	GmEPSPS_Nat	CGGAGATCGT	GTTGGAACCC	ATCAAAGACT	TCTCGGGTAC	CATCACATTG	300
	GmEPSPS_GM	.T..A..T..	TC.T....G	.A..G..T.	....A.....	G..T...C.A	
301	GmEPSPS_Nat	CCAGGGTCCA	AGTCTCTGTC	CAATCGAATT	TTGCCTTCTTG	CTGCTCTCTC	350
	GmEPSPS_GM	..T..A..A.	..AG...C..	T...A....	...T.G..C.	.A....G..	
351	GmEPSPS_Nat	TGAGGGAACA	ACTGTTGTAG	ACAACTTGTT	GTATAAGTGAG	GATATTCAATT	400
	GmEPSPS_GM	C..A....C	....A..C..	.T...C.CC.	T....C.A	....A....	
401	GmEPSPS_Nat	ACATGCTTGG	TGCATTAAGG	ACCCTTGGAC	TGCCGTGTGGA	AGATGACAAA	450
	GmEPSPS_GM	.T...T.G..	G..GC.C..A	.T....G..	.AA.A..T..	G..C..T..G	
451	GmEPSPS_Nat	ACAACCAAAC	AAGCAATTGT	TGAAGGCTGT	GGGGGATTGT	TTCCCCACTAG	500
	GmEPSPS_GM	..T...T....	....T..C..	C....T...	..C..G....	.C..T...TC	

Figure 3B

18/52

501	GmEPSPS_Nat	TAAGGAATCT	AAAGATGAAA	TCAATTATT	CCTTGGAAAT	GCTGGTATCG	550
	GmEPSPS_GM	...A...AG.	.....G.	.A..C..G..	T....C..C	..A..A....	
551	GmEPSPS_Nat	CAATGAAGTC	CTTGACAGCA	GCTGTGGTTG	CTGCAGGTGG	AAATGCAAGC	600
	GmEPSPS_GM	.....AG	.C.C..C..T	.....C....	...G...G....	T..C..T..T	
601	GmEPSPS_Nat	TACGTACTTG	ATGGGGTGCC	CCGAATGAGA	GAGAGGCCAA	TTGGGGATT	650
	GmEPSPS_GM	....CT.A.	.C..C.....	TA.....C..	..A..A..T.	.C..T...C.	
651	GmEPSPS_Nat	GGTTGCTGGT	CTTAAGCAAC	TTGGTGCAGA	TGTTGATTGC	TTTCTTGCA	700
	GmEPSPS_GM	A..G.....C	..A..A..G.	....A.....	C..C.....T	..CT.G....	
701	GmEPSPS_Nat	CAAACGTCC	ACCTGTTCGT	GTAATGGGA	AGGGAGGACT	TCCCTGGCGGA	750
	GmEPSPS_GM	....T..C..	G..C..GA.A	..G..C....	.....CT.	G..A....T	

Figure 3C

19/52

GmEPSPS_Nat	AAGGTGAAAC	TGTCTGGATC	AGTTAGCAGT	CAATACTTGA	CTGCTTTGCT	800
GmEPSPS_GM	....T....	.A..C....	G..CTCGTCA	..G...C.A.	....A....	
						850
GmEPSPS_Nat	TATGGCAGCT	CCTTTAGCTC	TTGGTGATGT	GGAAATTGAG	ATTGTTGATA	801
GmEPSPS_GM	C....C..C	..GC.C..T	.G..G...C..	...G....A	..C...C....	
						900
GmEPSPS_Nat	AACTGATTTC	TGTTCCATAT	GTTGAAATGA	CTCTGAAGTT	GATGGAGCGT	851
GmEPSPS_GM	.GT.....AG	C..G..T...	..G.....	.C..C..A..	.....A.G	
						950
GmEPSPS_Nat	TTTGGAGTTT	CTGTTGAAACA	CAGTGGTAAT	TGGGATAGGT	TCTTGGTCCA	901
GmEPSPS_GM	..C.....	.G..A.....	.TCC..G...	.....C...	.TC.T..A..	
						1000
GmEPSPS_Nat	TGGAGGTCAA	AAGTACAAGT	CTCCTGGCAA	TGCTTTGTT	GAAGGTGATG	951
GmEPSPS_GM	C.....G...	....AA	GC..A.....	...C..C..C	....G..C..	

Figure 3D

20/52

1001 GmEPSPS_Nat GmEPSPS_GM	CTTCAAAGTGC....G..C.. CAGTTATTAA CTAGCTGGTG CAGCAATTAC TGGTGGGACT C...C..A.. C....C..C	1050 GmEPSPS_Nat GmEPSPS_GM	ATCACCTGTTA....A..C..G. ATGGCTGTGG .C.....C.. ACAAGCAGT....CTCATCC TTACAGGGAG C.T..A..T.. ATGTAAATT G..
1051 GmEPSPS_Nat GmEPSPS_GM	TGCTGAAGTT C....G..C CTTGAAAGAA T.G..G..A.. TGGGAGCTAA....C..A.. GGTTACATGG....C.....T TCAGAGAACAA T.....T.....	1100 GmEPSPS_Nat GmEPSPS_GM	1101 TGCTGAAGTT C....G..C CTTGAAAGAA T.G..G..A.. TGGGAGCTAA....C..A.. GGTTACATGG....C.....T TCAGAGAACAA T.....T.....
1151 GmEPSPS_Nat GmEPSPS_GM	GTGTCACTGT....C..A..C.. TTCTGGACCA G..C.....T CCACGAGATT ..CA....C.. TTTCTGGTCG....C..A.. AAAAGTCTTG....C..T	1200 GmEPSPS_Nat GmEPSPS_GM	1151 GTGTCACTGT....C..A..C.. TTCTGGACCA G..C.....T CCACGAGATT ..CA....C.. TTTCTGGTCG....C..A.. AAAAGTCTTG....C..T
1201 GmEPSPS_Nat GmEPSPS_GM	CGAGGCATTG A.G..A..A.. ATGTCAATAT....G..... GAACAAGATG....T..... CCAGATGTTG....G.. CCATGACACT....G..	1250 GmEPSPS_Nat GmEPSPS_GM	1201 CGAGGCATTG A.G..A..A.. ATGTCAATAT....G..... GAACAAGATG....T..... CCAGATGTTG....G.. CCATGACACT....G..

Figure 3E

21/52

1251	GmEPSPS_Nat	TGCTGTTGTT	GCACATTG	CTAATGGTCC	CACTGCTATA	AGAGATGTGG	1300
	GmEPSPS_GM	C.....C	..C..G..C.	.A..C..A..	T..C..A...	...G.....C..	
1301	GmEPSPS_Nat	CAAGTTGGAG	AGTTAAAGAG	ACTGAGAGGA	TGATAGCAAAT	CTGCACAGAA	1350
	GmEPSPS_GM	.TTCA...C.	T.....G..A	.C..AC...	....C..T..	T.....C..G	
1351	GmEPSPS_Nat	CTCAGAAAGC	TAGGAGAAC	AGTTGAAGAA	GGTCCTGATT	ACTGTGTGAT	1400
	GmEPSPS_GM	T.GC.T...	.G..T...	G..G.....	..A..A..C..	.T..C.....	
1401	GmEPSPS_Nat	TACTCCACCT	GAGAAATTGA	ATGTCACAGC	TATAGACACA	TATGATGACC	1450
	GmEPSPS_GM	A..A..T...	..A..GC.C..	....G..C..	....T	....C..T..	
1451	GmEPSPS_Nat	ACAGAATGGC	CATGGCATTTC	TCTCTTGCTG	CTTGTGGGA	TGTTCCAGTA	1500
	GmEPSPS_GM	.....	T.....	..A.....	....C..T..	..C..G..G..T	

Figure 3F

22/52

1501 GmEPSPS_Nat	ACCATCAAGG ATCCTGGTTG CACCCAGGAAG ACATTTCTTG ACTACTTTGA
GmEPSPS_GM	..G..... .C..A..G.. T..T..... . .C..A.. .T..... .
1550	
1551 GmEPSPS_Nat	AGTCCTTGAG AGGTAAACAA AGCACTAA
GmEPSPS_GM	G..GT.G..A ..A..G..... G.
1558	

Figure 3G

23/52

1	BAR1_Nat	ATGAGCCAG	AACGACGGCC	GGCCGACATC	CGCCGTGCCA	CCGAGGCCGA
	BAR1_ZM	...TCG..T.	.G..C..T..	T..T..A..A..C..T..	....A..A..C..T..	....A..A..C..T..
	BAR1_AT	....T....	..A.GA.A..	...T..T..T..T	..GA.A...A..	....A..T..A..
51	BAR1_Nat	CATGCCGGCG	GTCTGCACCA	TCGTCAACCA	CTACATCGAG	ACAAGCACGG
	BAR1_ZM	....T..T	..T...T..T..	..T..G..T..	....T..T..T..	....TCT..T..T..
	BAR1_AT	....T..T	..T..T..A..	...A.....	..T..T.....	..CTCG..A..
101	BAR1_Nat	TCAACTTCG	TACCGAGCCG	CAGGAACCGC	AGGAACTGGAC	GGACGACCTC
	BAR1_ZM	..A.....	C..T.....T	..A.....	....T..T..T..	....C..T..T..T..
	BAR1_AT	.T..T..T..	C..T.....	....G..A..	....T..T..T..	....T..T..G..A..
151	BAR1_Nat	GTCCCGTCTGC	GGGAGGGCTA	TCCCTGGCTC	GTCGCCGAGG	TGGACGGCGA
	BAR1_ZM	..G.....CA	.A.....T..	...G.....G	..T..A.....	....T..A..A..
	BAR1_AT	..A...T..AA	.A..A..T..	...G.....A	..T..T..A..	....T..T..A..A..

Figure 4A

24/52

201 BAR1_Nat GGTGGCCGGC ATCGGCCCTACG CGGGCCCCCTG GAAGGCACCGC AACGCCCTACG
 BAR1_ZM A..G..T..G
 BAR1_AT A.....T..T..A..T....

250

251 BAR1_Nat ACTGGACGGC CGAGTCGACC GTGTACGTCT CCCCCGCCA CCAGGGGACG
 BAR1_ZM .T.....T..
 BAR1_AT A..A..A..C..T ..C.....A G.....T..T.. T..AA.A..C

300

301 BAR1_Nat GGACTGGGCT CCACGGCTTA CACCCACCTG CTGAAGTCCC TGGAGGCACA
 BAR1_ZM ...G...C....
 BAR1_AT ...T.A..GA G....T.G.. ...T..T..T.T.A....A.

350

351 BAR1_Nat GGCGTTCAAG AGCGTGGTCG CTGTCATCGG GCTGCCAAC GACCCGAGCG
 BAR1_ZM A.....
 BAR1_AT A.....T..G.. .A..T..T.. AT....A....T....T.

400

Figure 4B

25/52

401
BAR1_Nat TGGGCATGCA CGAGGGGCTC GGATATGCC CCGCGGGCAT GCTGCGGGCG
BAR1_ZM ..A.A.... .A...A.. .T..A...T.. .T..A...A.. .T..A...A.. .A...A..T..
BAR1_AT .T..A.... .A...A.. .T..A...T.. .T..A...A.. .T..A...A.. .T..A...A..T..

450
451
BAR1_Nat GCCGGCTTCA AGCACGGGAA CTGGCATGAC GTGGGTTTCT GGCAGGCTGGA
BAR1_ZM ..T..A.... .T..A...T.. .T..A...T.. .T..A...T.. .T..A...T.. .T..A...T..
BAR1_ATA.... .A...T..A.. .A...T..A.. .A...T..A.. .A...T..A.. .A...T..A..

500
501
BAR1_Nat CTTCAGCCCTG CCGGTACCGC CCCGTCCGGT CCTGCCCGTC ACCGAGATCT
BAR1_ZMTCTT.. .A..T..A.. .T..A..T.. .A..T..A.. .A..T..A.. .A..T..A..
BAR1_AT ...TTCA..T ..C..T..C.. .TA..A..T.. .A..T..A..T.. .T..A..

550
551
BAR1_Nat GA
BAR1_ZM AG
BAR1_AT AG

Figure 4C

26/52

1	ATGGCGCAAG TTAGCAGAAT CTGCAAATGGT GTGCAGAAC CATCTCTTAT ·CTCCAAATCTC	60
CTP2CP4_NAT	..... .A..T..... C..... C..... G..G..G..	
CTP2CP4_ZM	..... C..G.. .A..T..G.. T..C..A.. C..A.. T..A..A.. A..G..C..G..	
CTP2CP4_AT	..... C..G.. .A..T..G.. T..C..A.. C..A.. T..A..A.. A..G..C..G..	
CTP2CP4_GM	..... C..G.. .A..T..G.. T..C..A.. C..A.. T..A..A.. C..G..	
61	TCGAAATCCA GTCAACGCCA ATCTCCCTTA TCGGTTTCTC TGAAAGACGCC GCAGGCATCCA	120
CTP2CP4_NAT	AGC..G..C..G.. .C..G..G.. G..G..GC.. C..... C..C..A..C..A..C..G..	
CTP2CP4_ZM	..... AG..T C....A..A.. G..G..GC..T ..T..A..GT ..A..T..A..C..G..	
CTP2CP4_AT	..... AG..T C....A..A.. G..G..GC..T ..T..A..GT ..A..T..A..C..G..	
CTP2CP4_GM	..... GT CA....T.. G..G..A...T.. G..G..A...T.. AGCT ..T..A..T..A..C..T	
62	CGAGCTTATC CGATTTCGTC GTCGTTGGGA TTGAAGAAGA GTGGGATGAC GTTAATTGGC	180
CTP2CP4_NAT	A..G..C..C.. T..CAGC.. A..C..C.. C..C..C..	
CTP2CP4_ZM	..... C..C..AAG C..C..C.. T..C..A.. A..A.. A..C..G..C..	
CTP2CP4_AT	..... C..C..AAG C..C..C.. T..C..A.. A..A.. A..C..G..C..	
CTP2CP4_GM	..... C..A....T.. A..AAG CAGT ..T.. AT CG..T.... C..G....T	
63	TCTGAGCTTC GTCCTCTTAA GGTCATGTCT TCTGTTTCCA CGGCCTGCAT GCCTCACGGT	240
CTP2CP4_NAT	AGC..G..G.. .G..A..C.. .G..G..G.. C..G..C..A.. A..A..A..	
CTP2CP4_ZM	..... A..A..A.. A..G..G.. A..G..G.. C..A..CAG.. T..T..A..	
CTP2CP4_AT	..... A..A..A.. A..G..G.. A..G..G.. C..A..CAG.. T..T..A..	
CTP2CP4_GM	..... A..A..A.. A..G..AT..G.. .G..AT..G.. A..AGT.. A..T..A..	

Figure 5A

27/52

241	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	GCAAGCAGCC	GGCCCCGCAAC G... G... A... A...	CGCCCCGCAA T... T... T... G...	TCCCTCTGGCC C... C... G... G...	TTTCCGGAAC G... G... G... T...	CGTCCGGCATT G... G... G... T...
300							
301	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	CCC GGCGGACA G... T... T... A...	AGTCGATCTC C... A... A... A...	CCACCGGTCC G... A... A... C...	TTCATGTTCG G... A... A... T...	GCGGTCTCGC G... T... T... A...	GAGCGGTGAA C... C... C... G...
360							
361	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	ACGGCGCATCA G... G... A... A...	CCGGCCTTCT G... G... T... T...	GGAAAGGGAG G... G... T... T...	GACGTCAATCA G... G... A... A...	ATACGGGCAA G... G... C... A...	GGCCATATGCAG G... G... C... A...
420							
421	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	GCGATGGCG T... A... T... T...	CCGGCATCCG G... A... T... T...	TAAGGAAGGC T... A... G... T...	GACACCTGGA C... A... T... C...	TCATCGATGG C... T... G... A...	CGTCCGGCAAT G... G... C... A...
480							

Figure 5B

28/52

481	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	GGCGGCCCTCC ...T.G. ...A..AT.G. .T..T.A.	TGGCGCCCTGA .C..C... .C..T.. .T..A.. .G..	GGCGCCGCTC ...C..T.. ...A..T.. .T..A..	GATTTCGGCA ...C..T.. ...C..T.. ...C..T..	ATGCCGCCAC ...G..G.. ...G..T.. ...G..A..	GGGCTGCCGC ...A..G ...T..T ...A..G..
540	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	CTGACCGATGG ...C..T.. ...T..T.. .T..T.. .T..T.	GCCTCGTCGG ...A..G.. ...A..G.. ...G..T.. ...G..T..	GGTCTACGAT ...G..C.. ...C..G.. ...T..C.. ...T..T..	TTCGACAGCA ...T..T.. ...T..T.. ...T..T.. ...T..T..	CCTTCATCGG ...G..A.. ...G..T.. ...G..T.. ...G..T..	CGACGCCCTCG ...A..A.. ...T..A.. ...T..G.. ...T..T..
541	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	CTGACCGATGG ...C..T.. ...T..T.. .T..T.. .T..T.	GCCTCGTCGG ...A..G.. ...A..G.. ...G..T.. ...G..T..	GGTCTACGAT ...G..C.. ...C..G.. ...T..C.. ...T..T..	TTCGACAGCA ...T..T.. ...T..T.. ...T..T.. ...T..T..	CCTTCATCGG ...G..A.. ...G..T.. ...G..T.. ...G..T..	CGACGCCCTCG ...A..A.. ...T..A.. ...T..G.. ...T..T..
601	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	CTCACAAAGC ...T..T.. ...T..A.. .T..A..	GCCCCGATGGG ...A..A.. ...A..A.. ...A..A..	CCGC GTGTTG ...A..T.. ...A..C.. AA..A..CC..T	AACCCGCTGC ...T..T.. ...T..C.. ...T..A..	GCGAAATGGG ...G..G.. ...G..G.. ...G..G..	CGTGCAGGTG ...A..C.. ...T..C.. ...T..A..
661	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	AAATCGGAAG ...C..G.. ...T..G.. ...G..C..G.	ACGGTGACCG ...T..T.. ...T..T.. ...C..A..	TCTTCCCGTT ...T..G.. ...G..G.. AT..G..	ACCTTGGCG ...GC.. ...TC.. ...AT..G..	GGCCGAAGAC ...T..C.. ...A..C.. ...C..T..	GCCGACGCC ...C..C.. ...C..C.. ...A..C..T
720	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	AAATCGGAAG ...C..G.. ...T..G.. ...G..C..G.	ACGGTGACCG ...T..T.. ...T..T.. ...C..A..	TCTTCCCGTT ...T..G.. ...G..G.. AT..G..	ACCTTGGCG ...GC.. ...TC.. ...AT..G..	GGCCGAAGAC ...T..C.. ...A..C.. ...C..T..	GCCGACGCC ...C..C.. ...C..C.. ...A..C..T

Figure 5C

29/52

721	CTP2CP4NAT	ATCACCTACC	GCGTGCCGAT	GGCCTCCGCA	CAGGTGAAGT	CCGCCGTGCT	GCTCGCCGGC
	CTP2CP4_ZM	.T..T..T..T..	.A..A..A..A..	.C..C..C..C..	.A..A..A..A..	.C..C..C..C..	.A..A..A..A..
	CTP2CP4_AT	.G..G..G..G..	.T..T..T..T..	.G..G..G..G..	.A..A..A..A..	.G..G..G..G..	.G..G..G..G..
	CTP2CP4_GM	.T..T..T..T..	.A..A..A..A..	.T..T..T..T..	.A..A..A..A..	.T..T..T..T..	.A..A..A..A..
	
781	CTP2CP4NAT	CTCAACACGC	CCGGCATCAC	GACGGTCATC	GAGCCGATCA	TGACGCCGA	TCATACGGAA
	CTP2CP4_ZM	.G..G..G..G..	.T..T..T..T..	.G..G..G..G..	.C..C..C..C..	.G..G..G..G..	.C..C..C..C..
	CTP2CP4_AT	.A..A..A..A..	.T..T..T..T..	.A..A..A..A..	.C..C..C..C..	.T..T..T..T..	.A..A..A..A..
	CTP2CP4_GM	T.G...A.	G.T.T.	T.C.G.T	.....	.....	.....
841	CTP2CP4NAT	AAGATGCTGC	AGGGCTTTGG	CGCCAACCTT	ACCGTCGAGA	GGGATGCCGA	CGGCCGTGGC
	CTP2CP4_ZM	.T..T..T..T..	.G..G..G..G..	.G..G..G..G..	.G..G..G..G..	.C..C..C..C..	.CA..CA..CA..
	CTP2CP4_AT	.T..T..T..T..	.C..C..C..C..	.T..T..T..T..	.A..A..A..A..	.C..C..C..C..	.A..A..A..A..
	CTP2CP4_GM	.....T..T..T..	.....C..C..C..	.....T..T..T..	.....A..A..A..	.....T..T..T..	.....A..A..A..
901	CTP2CP4NAT	ACCATCCGCC	TGGAAGGCCG	CGGCAAGCTC	ACCGGCCAAG	TCATCGACGT	GCCGGGGGAC
	CTP2CP4_ZM	.....T..T..T..	.....G..G..G..	.....G..G..G..	.....G..G..G..	.....T..T..T..	.....T..T..T..
	CTP2CP4_AT	.....A..A..A..	.....T..T..T..	.....A..A..A..	.....G..G..G..	.....T..T..T..	.....T..T..T..
	CTP2CP4_GM	.....T..T..T..	.....G..G..G..	.....T..T..T..	.....A..A..A..	.....T..T..T..	.....T..T..T..

Figure 5D

961	CTP2CP4NAT	CCGTCCCTCGA	CGGCCCTTCCC	GCTGGTTGCG	GCCCTGCTTG	TTCCGGGCTC	CGACGTCACC
	CTP2CP4_ZM	...G..C.	...G..C.	...T..C..	...G..C..	..G..C..	T...G...
	CTP2CP4_AT	..C..G..C.	.A..G..T..	C..C..A..T	..GT..C..	.C..T..A..	T..T..G..G
	CTP2CP4_GM	C..AGC..	..G..	A..C..	..T..T..C..	.A..A..	..T..G..A

1081	CTP2CP4NAT	GGCGCCGACA	TCGAAGTCAT	CAACCCGCC	CTTGCCTGGG	GCGAAGACGT	GGCGGACCTG
	CTP2CP4_ZM	A.....	.....G.	.....G.	.....G.	T.....	T.....
	CTP2CP4_AT	.T...T..	....G..T..	....T..G.	..TA.G	T.G..A..T.	A..G..T..
	CTP2CP4_GM	..T..T..	....T..T..	....T..T..	....T..T..	....A..A..T..	....A..T..TT..

1141	CTP2CP4_NAT	CGCGTTCGCT	CCTCCACGCT	GAAGGGCGCT	ACGGTGCCGG	AAGACCCGCC	GCCTTCGATG
	CTP2CP4_ZM	.....G..	....T..C..	.....G..	....G..	....C..	....G..C...
	CTP2CP4_AT	.....G..T.	.TAGT..A..	....G..A..	....G..	....C..T..	....G..T..A..C...
	CTP2CP4_GM	....G..G..	....T..AT..	....A..T..T	....A..T..	....C..A..T..	....TA..G..A..A..

30/52

Figure 5E

31/52

1201	ATCGACGAAT	ATCCGATTCT	CGCTGTGCC	GCCGCCCTCG	CGGAAGGGGC	GACCGTGATG	1260
CTP2CP4_NAT	..A....G.	...T.....	G..C....	..T..G...	..C....	C..G...C...	
CTP2CP4_ZM	...A....G.	...T.....	G..C....	..T..G...	..C....	C..G...C...	
CTP2CP4_AT	...G..C....	...C..T..T	..C..T..T	..T..G..T	..C..G..C..	A..T..A...	
CTP2CP4_GM	..T....G.	...A....	T..C....G	..T....T	..T..G..C..	....
1261	AACGGTCTGG	AAGAACTCCG	CGTCAAAGGAA	AGCGAACCGCC	TCTCGGCCGT	CGCCAATGGC	1320
CTP2CP4_NAT	...G....T.	.G....	..G....	TCG..T...	..G....G..	G....	
CTP2CP4_ZM	...G....T.	.G....	..G....	..G..T...	..G....G..	G....	
CTP2CP4_AT	...C..T..G..GT..GA..	..G..T..G..	..G..T..G..	..T..A..G..	..G..C..G..	G..G...G...	
CTP2CP4_GM	..T..A..A..G..GT..GA..	..A..G..	..TC..A..AT	.GAGC..A..	..T..C..A..	....
1321	CTCAAGCTCA	ATGGCGTGGAA	TTGCGATGAG	GGCGAGACGT	CGCTCGTCGT	GGCTGGCCGC	1380
CTP2CP4_NAT	..G....C..T..T..	..C..T..T..	..C....C..	..T..C..	..A..G..	C....G	
CTP2CP4_ZM	..G....C..T..T..	..C..T..T..	..C....C..	..T..C..	..A..G..	C....G	
CTP2CP4_AT	..G....A..C....	..C....	..C....C..A	..T..A..	..C..T..A..	C....T..	
CTP2CP4_GM	..T..A....T..	....T..	....T..	..T....TA	GCT..A..	C....G..A	
1381	CCTGACGGCA	AGGGGCTCGG	CAACGCCCTCG	GGCCGCCCG	TCGCCACCCA	TCTCGATCAC	1440
CTP2CP4_NAT	...T....	....C....	....C....	....AGT	..A..G..	....G..	
CTP2CP4_ZM	...T....	....G....	....T..G..	..G..T..T..	..A..T..T..	..G..G..G..	
CTP2CP4_AT	...A....A..	....A..	....TT..G..	....T..T..	..T..A..T..	..T..A..T..	
CTP2CP4_GM	...A....A..	....A..	....TT..G..	....T..T..	..T..A..T..	..T..A..T..	

Figure 5F

32/52

1441	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	CGCATGCCA ...G. A..A. .G.	TGAGCTTCCT ...G. ...TCA. ..A..G.	CGTCATGGC G..G.. G..G.. G..G..	CTCGTGTGG ...T. ...A. ...T..T..	AAAACCCGT .G.. .G.. .G..	CACGGTGGAC .G.. G..C.. G..C.. G..A..C..	1500
1501	CTP2CP4NAT CTP2CP4_ZM CTP2CP4_AT CTP2CP4_GM	GATGCCACGA ...C. ...T..C. ...A..T.	TGATGCCAC ...A..G.. ...G.. ...T..	GAGCTTCCCC ...A..G.. CTC.. TTC..	GAGTTCATGG ...A.. T.. T..	ACCTGATGGC ...T.. ...C.. ...T..	CGGGCTGGC ...G.. A..CT.. TT.A...A..A..T	1560
1561	CTP2CP4NAT CTP4CP4_ZM CTP2CP4_AT CTP2CP4_GM	GCGAAGATCG ...C. ...C.. ...A..T..	AACTCTCCGA ...G..T.. ...G..T.. ...T..	TACGAAGGCT ...C.. ...T.. ...C..A..G	GCCTGA ...C.. ...C.. ...A..	1596		

Figure 5G

33/52

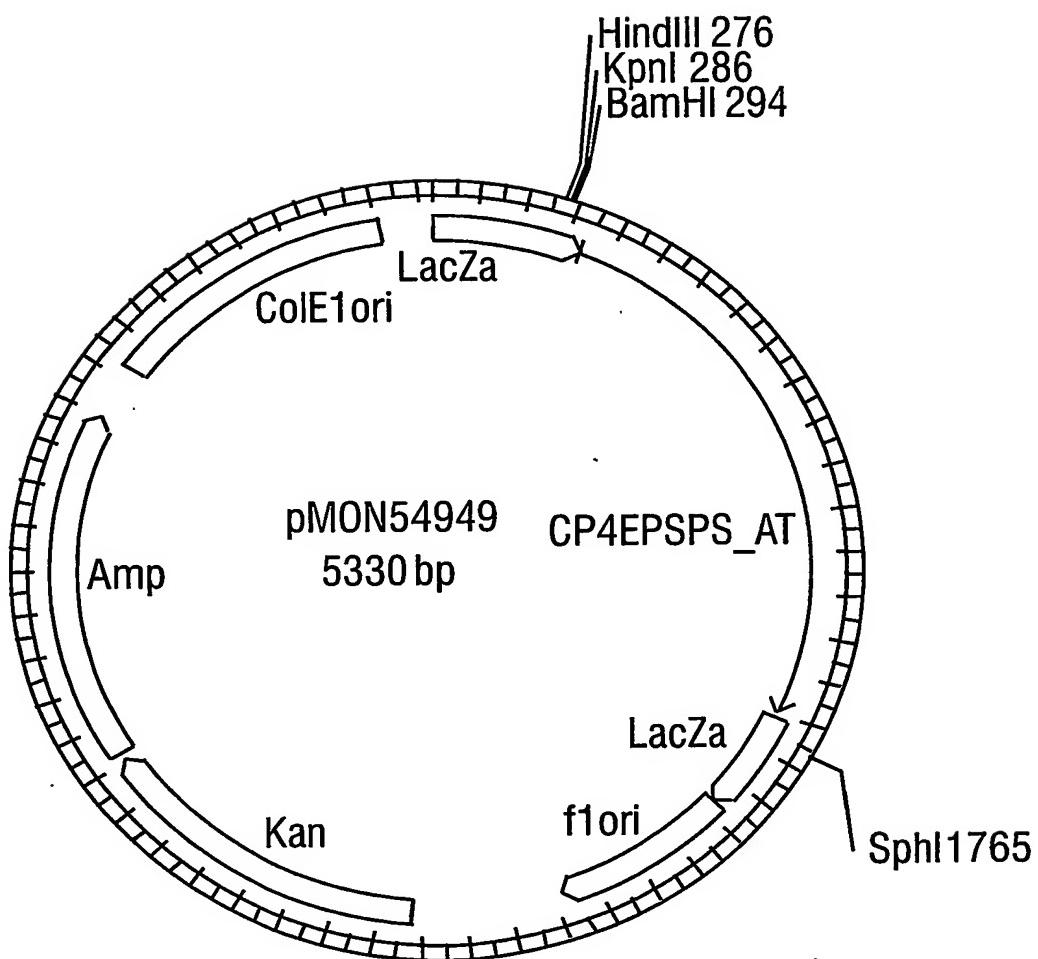


Figure 6

34/52

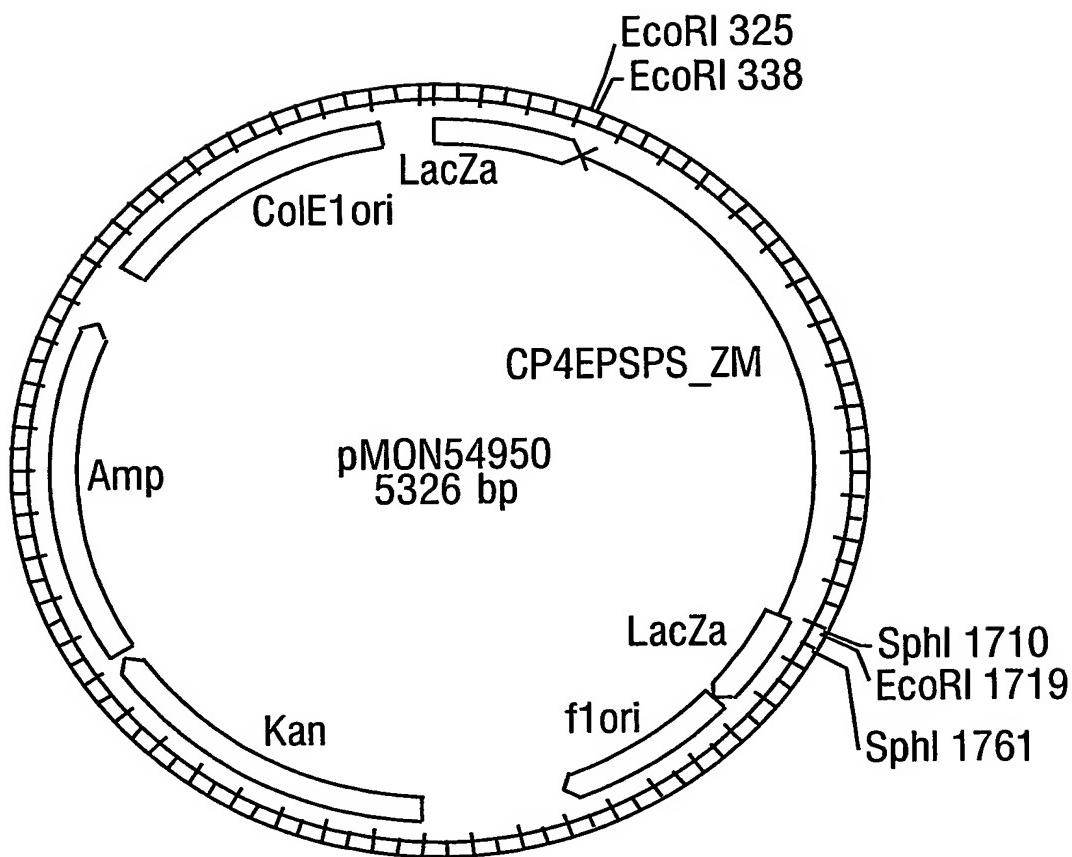


Figure 7

35/52

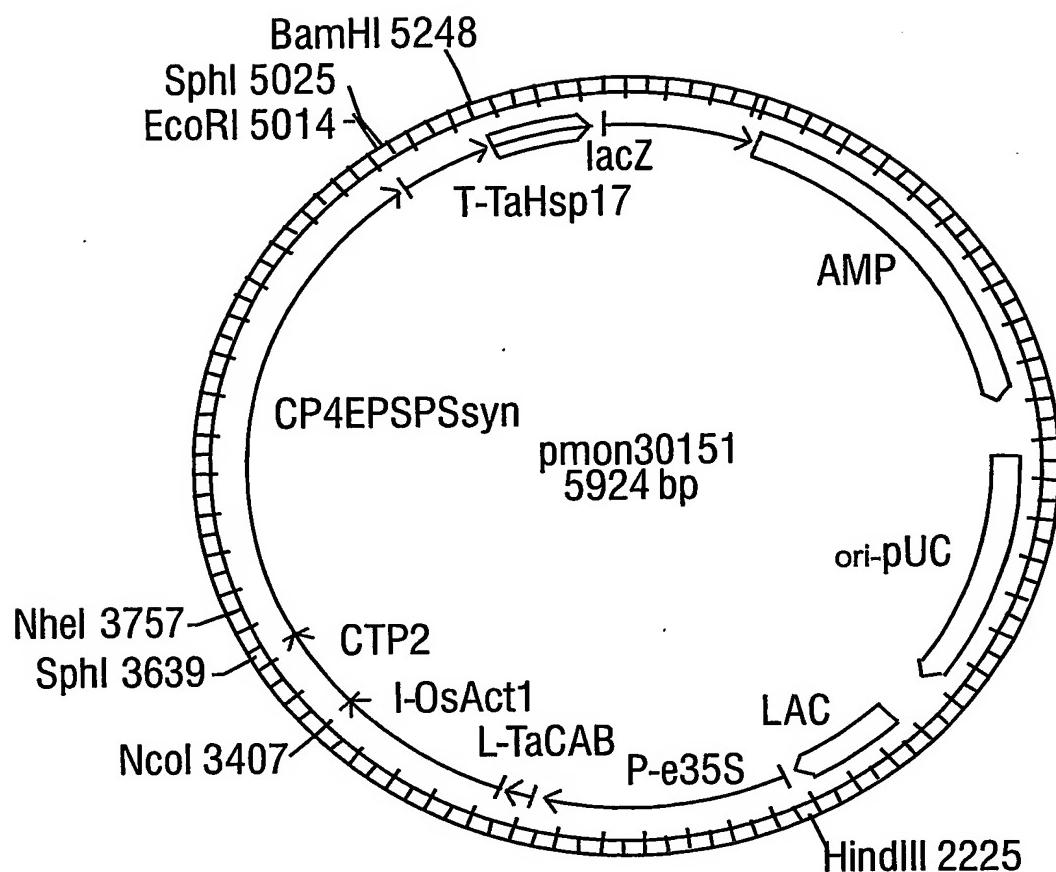


Figure 8

36/52

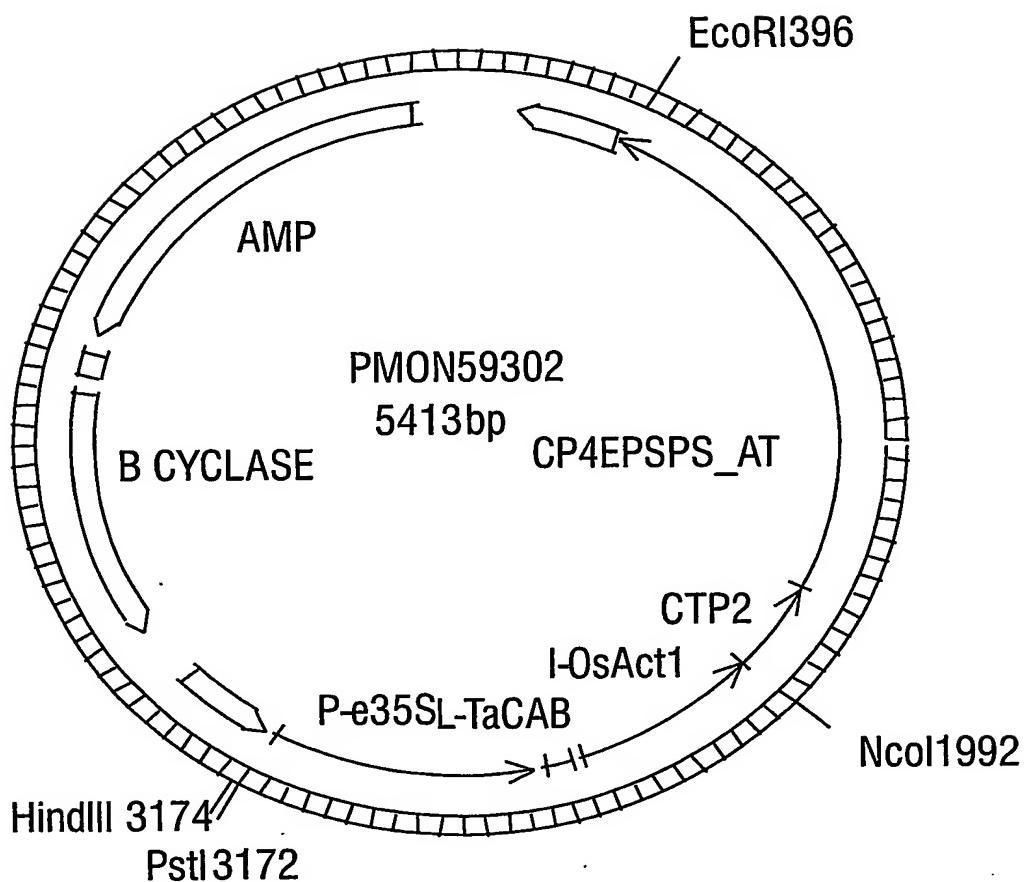


Figure 9

37/52

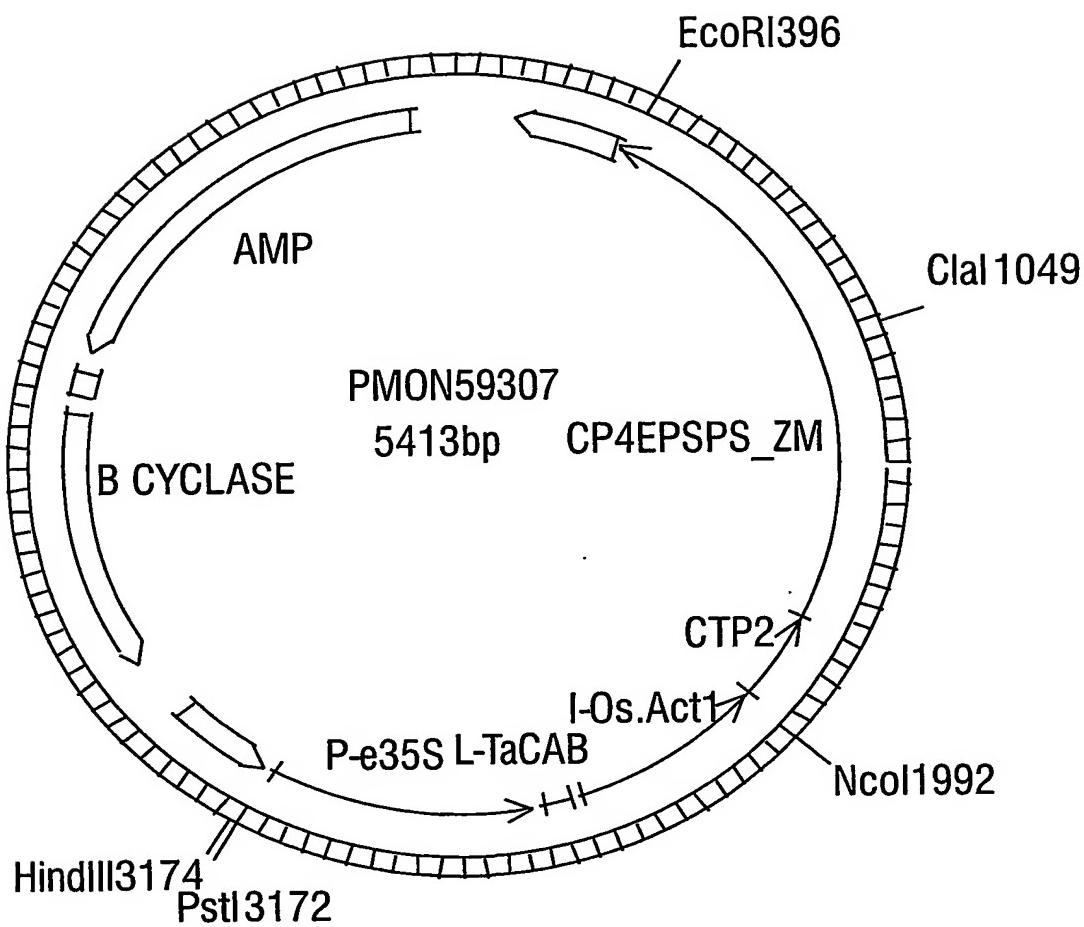


Figure 10

38/52

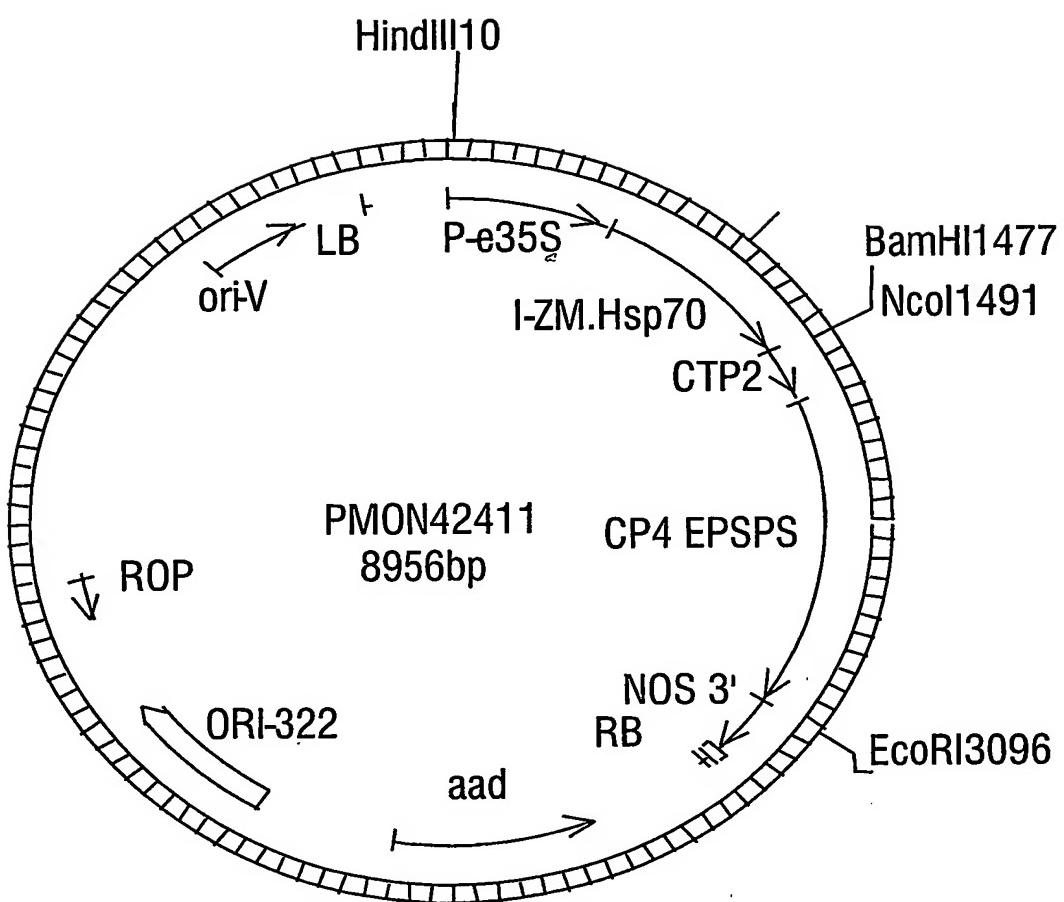


Figure 11

39/52

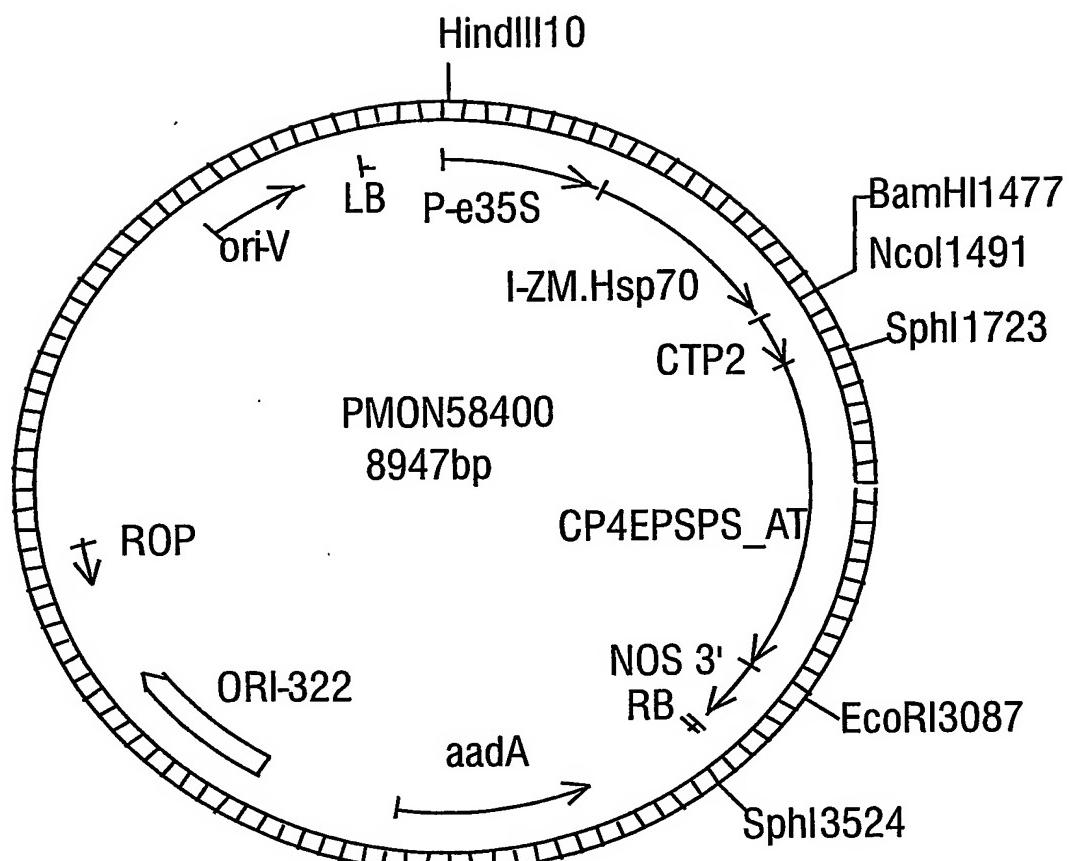


Figure 12

40/52

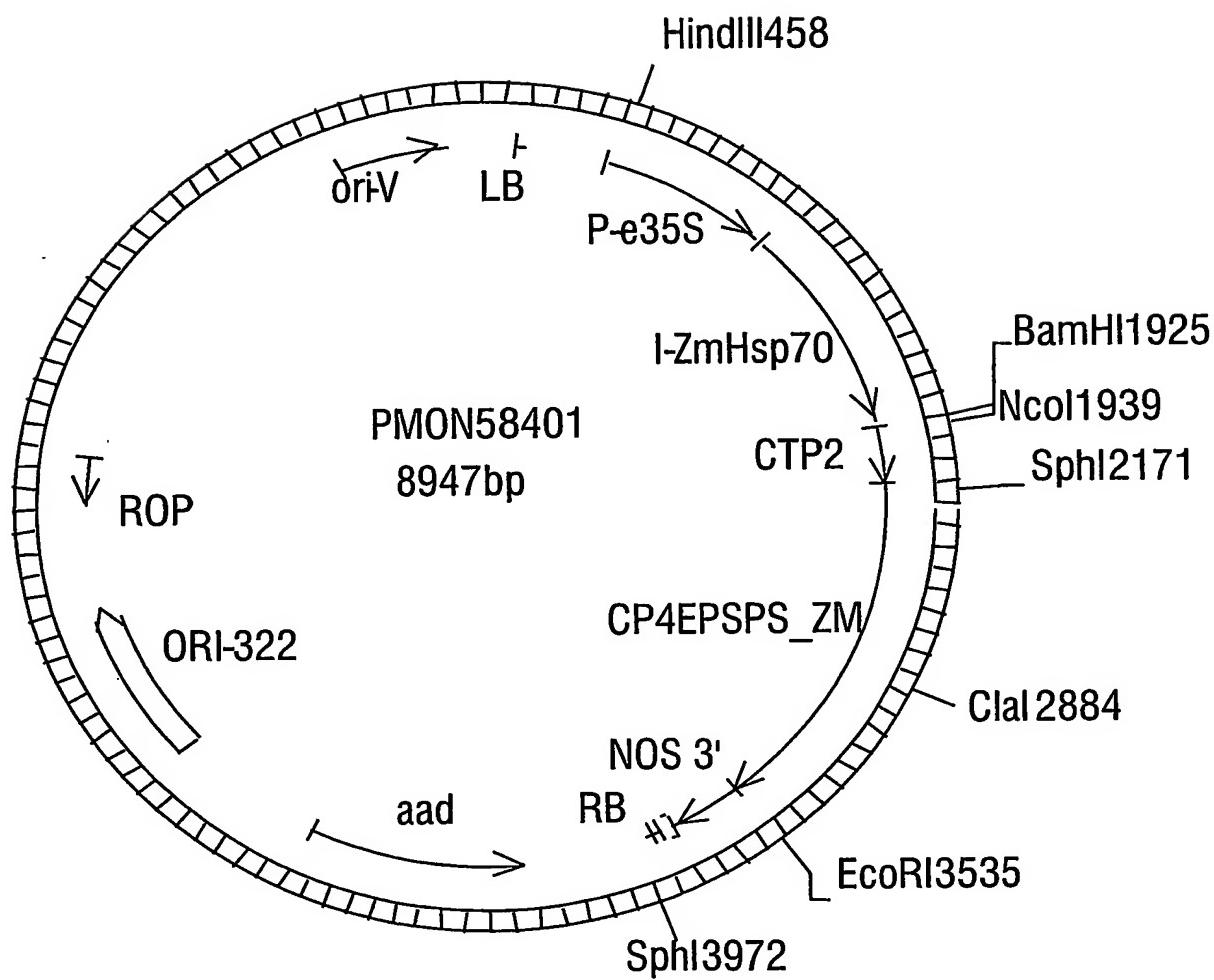


Figure 13

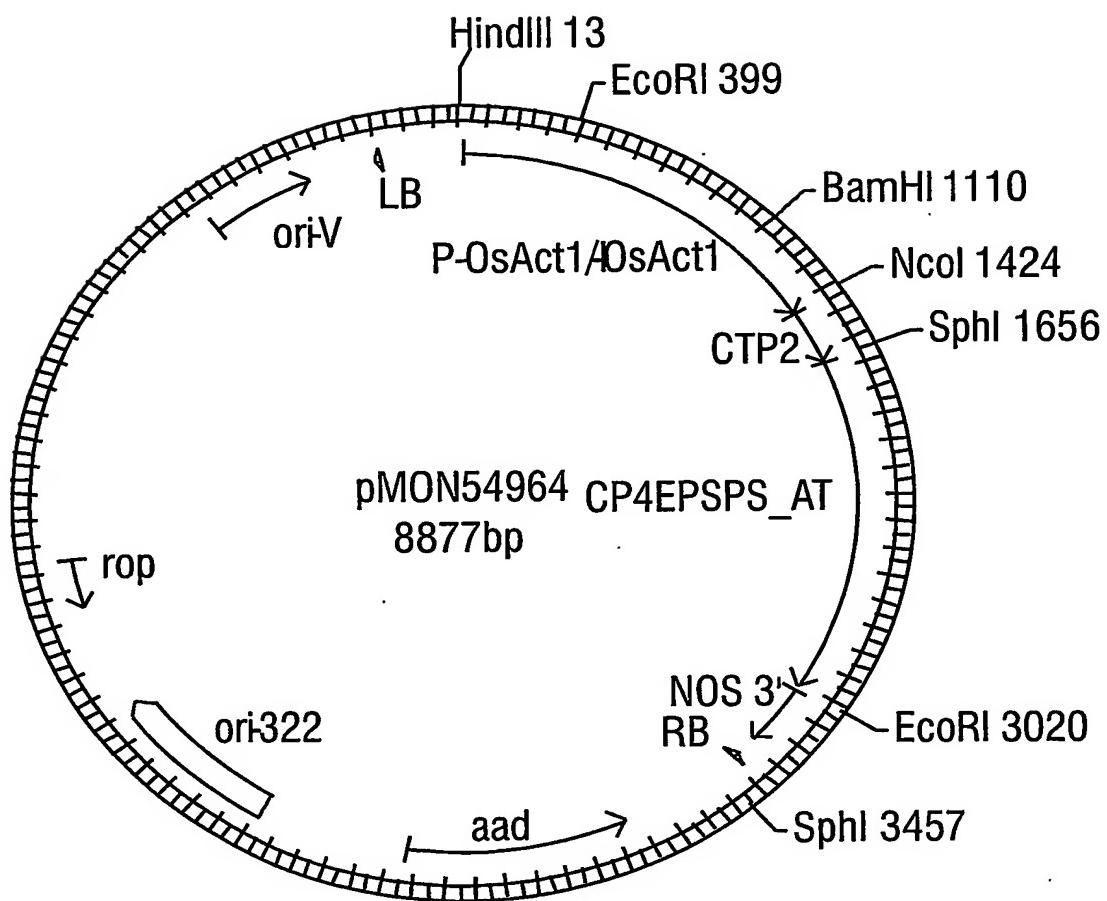


Figure 14

42/52

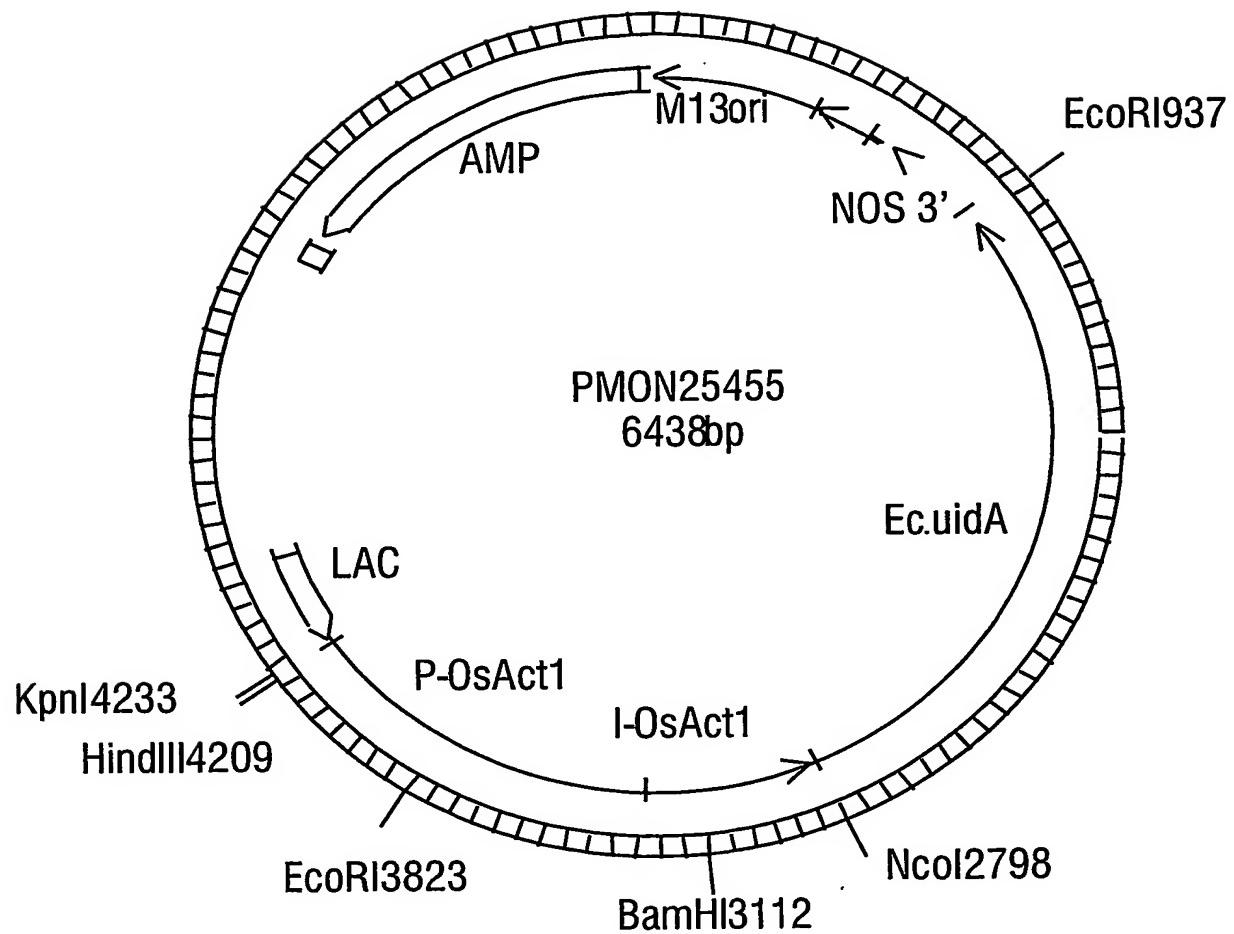


Figure 15

43/52

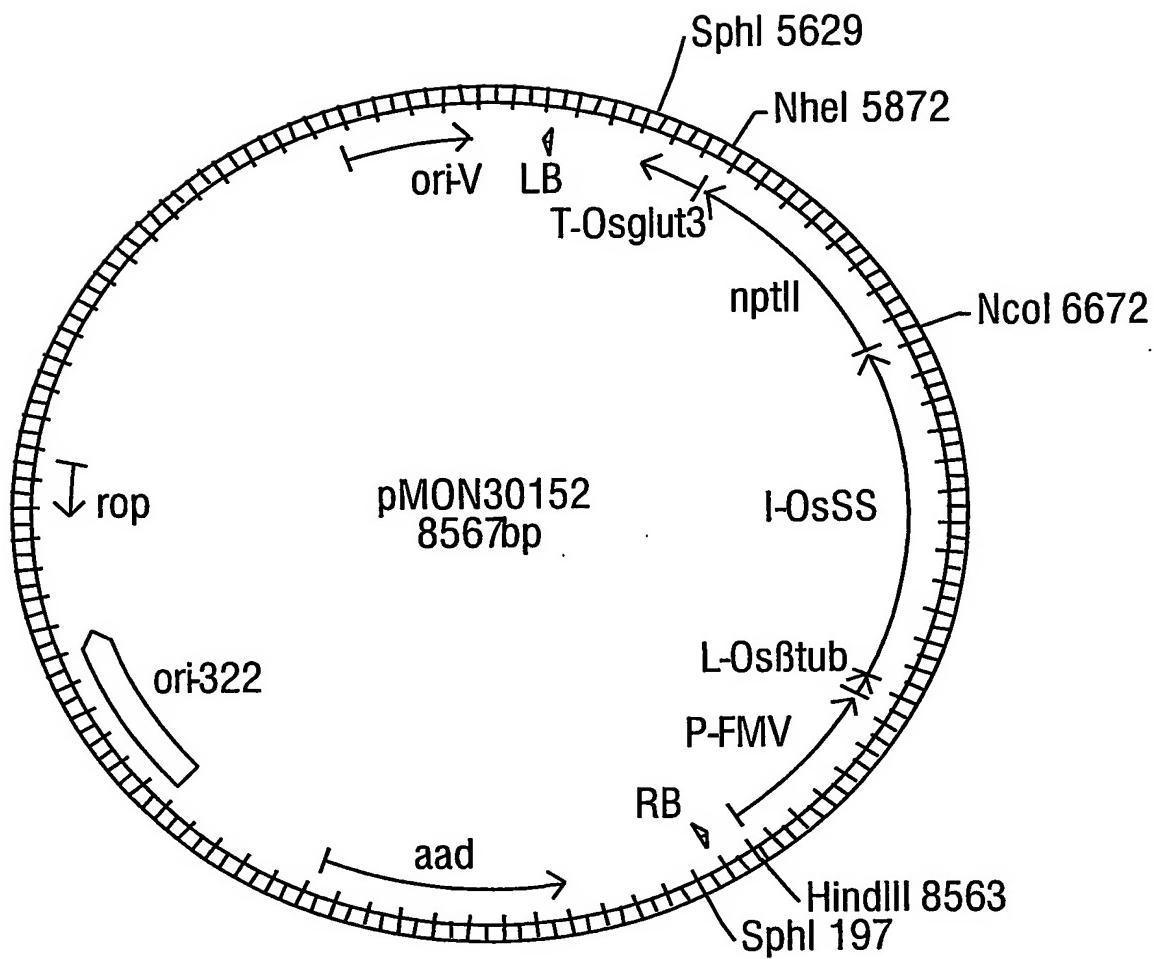


Figure 16

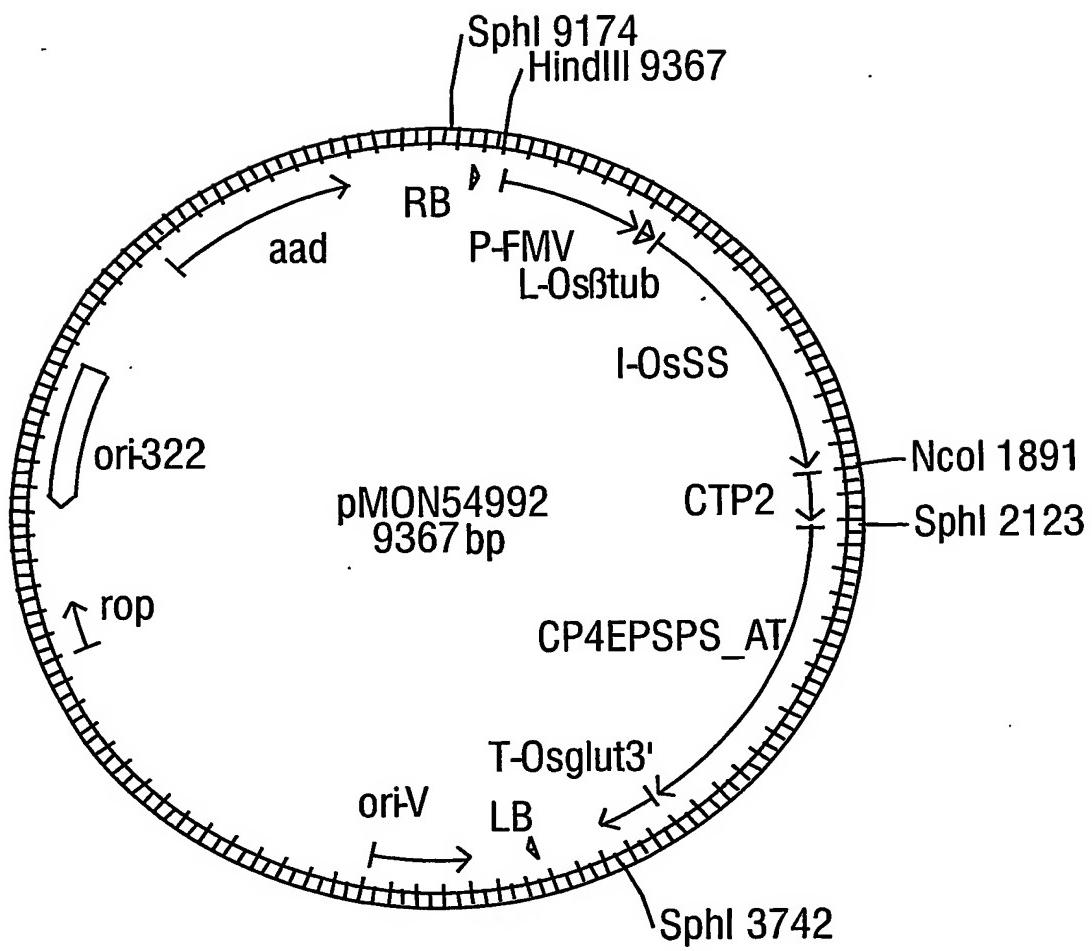


Figure 17

45/52

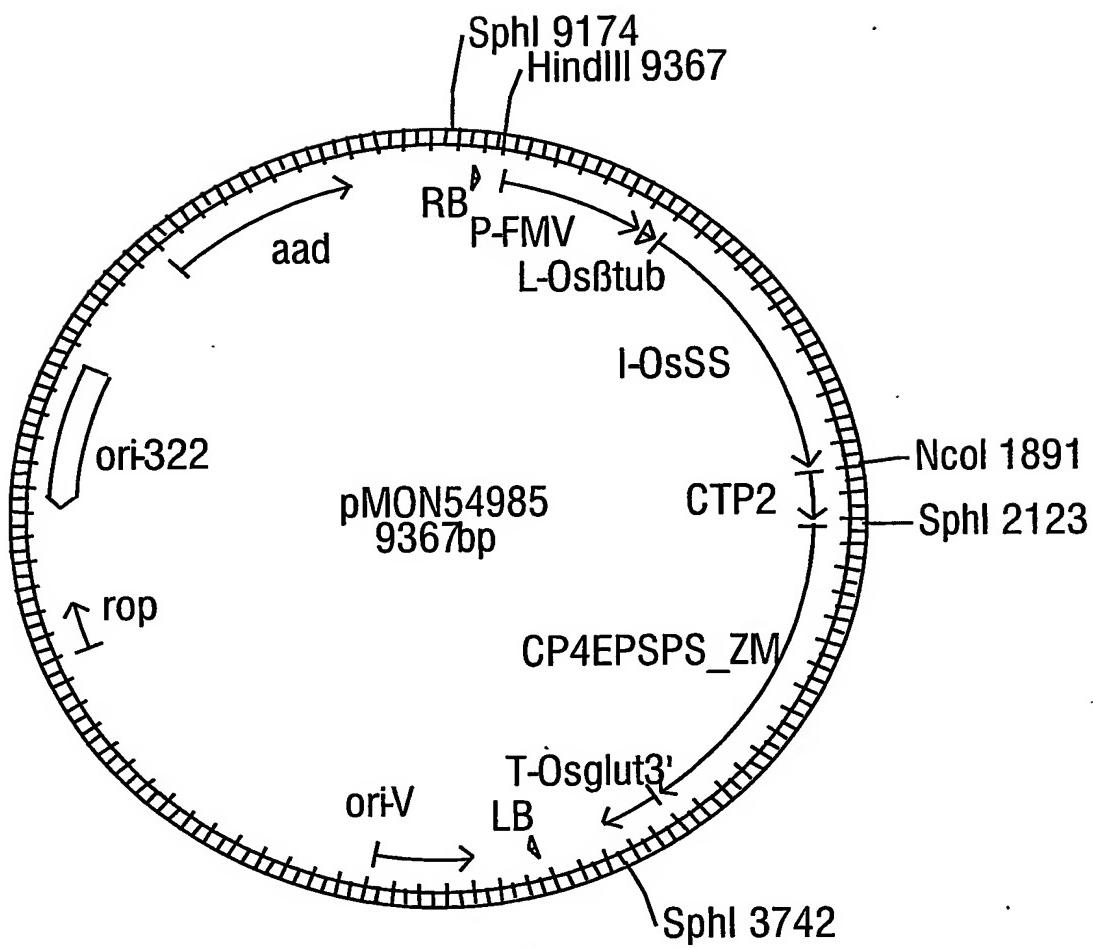


Figure 18

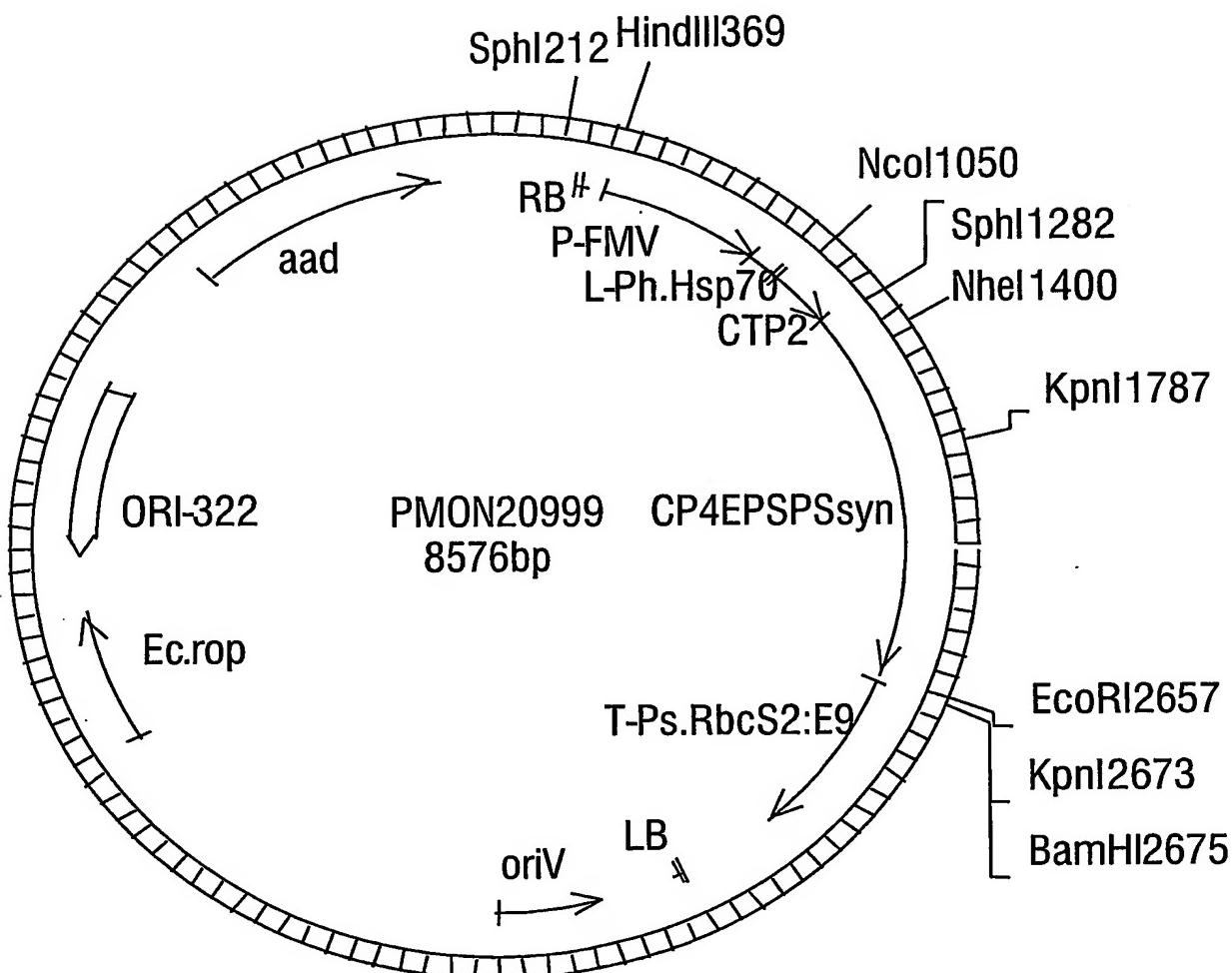


Figure 19

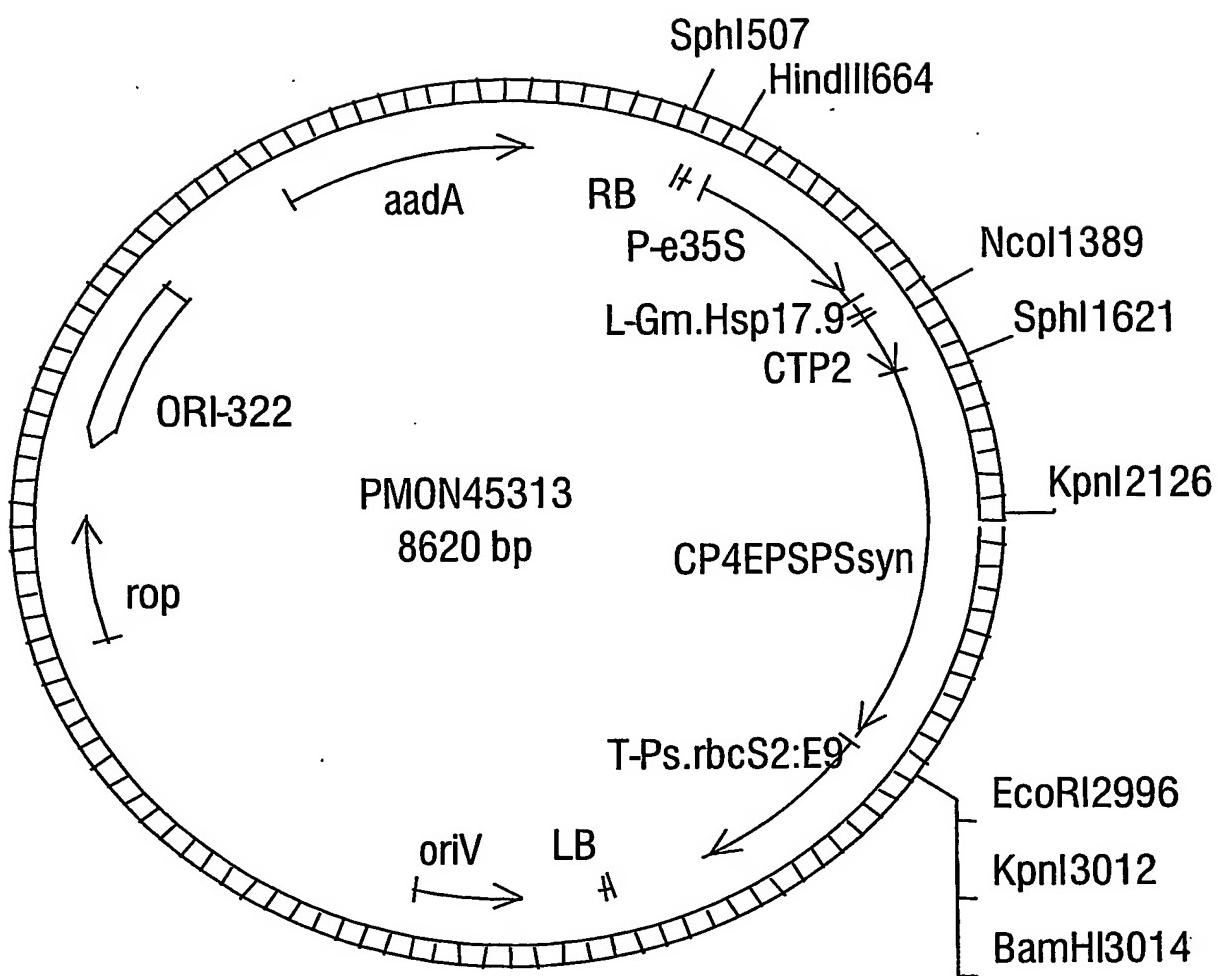


Figure 20

48/52

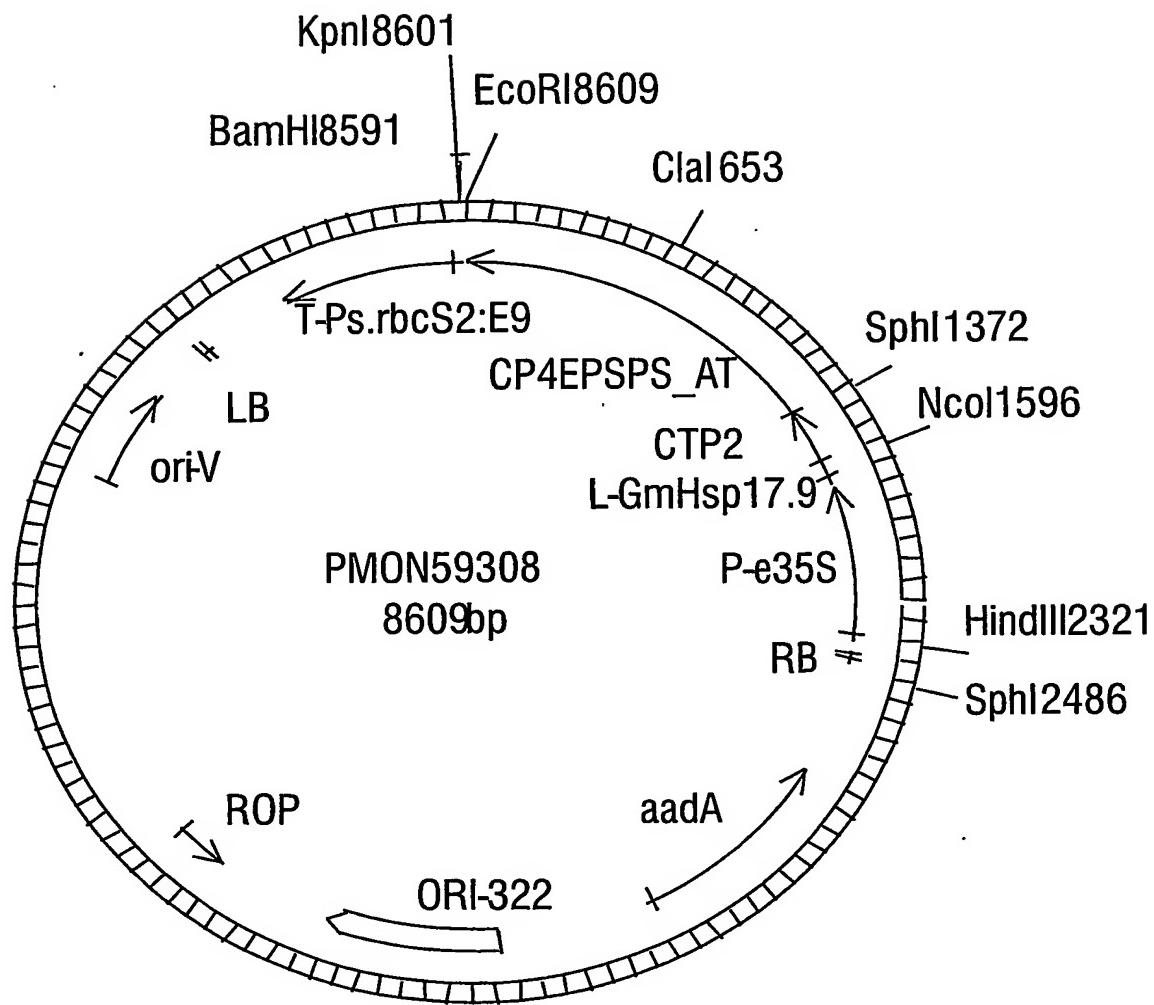


Figure 21

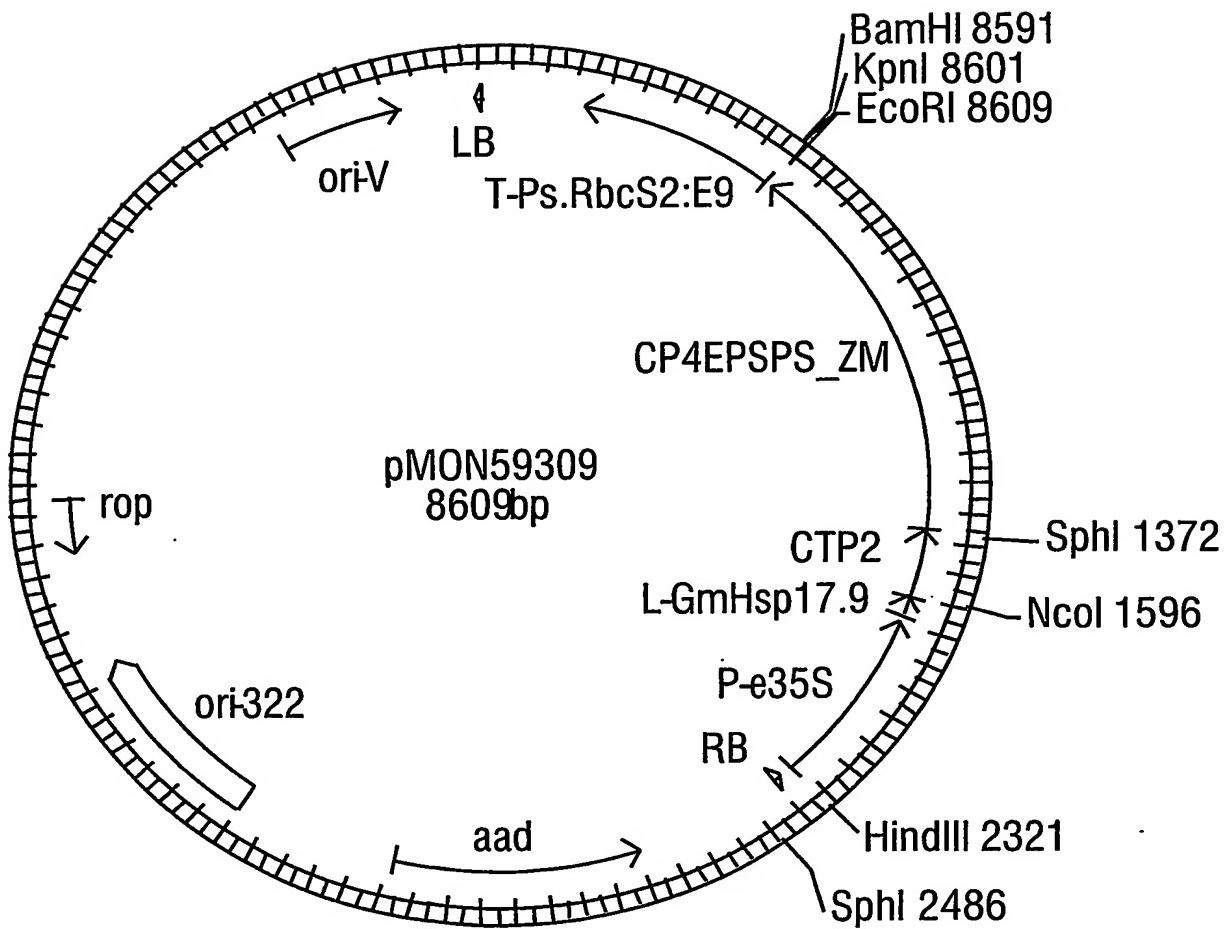


Figure 22

50/52

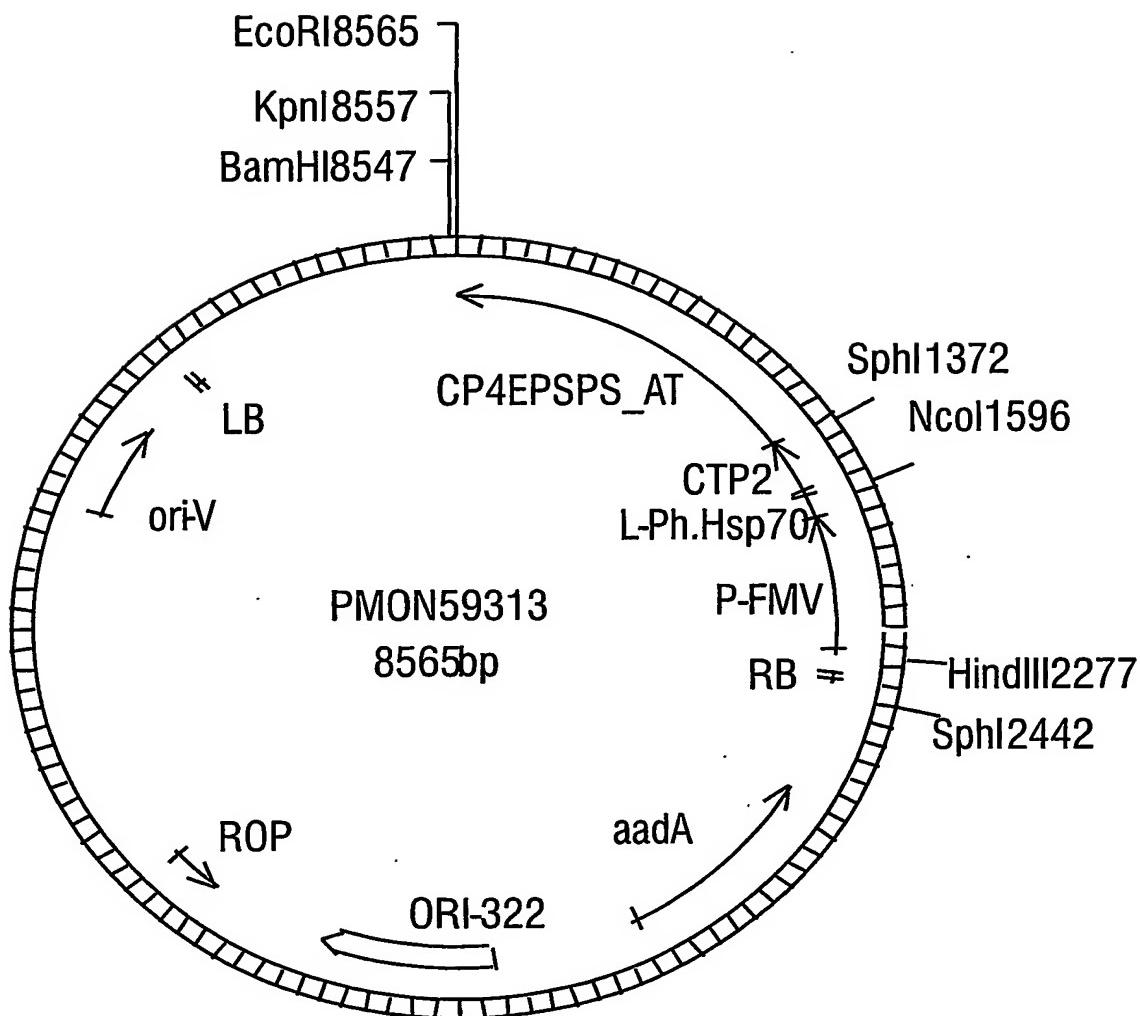


Figure 23

51/52

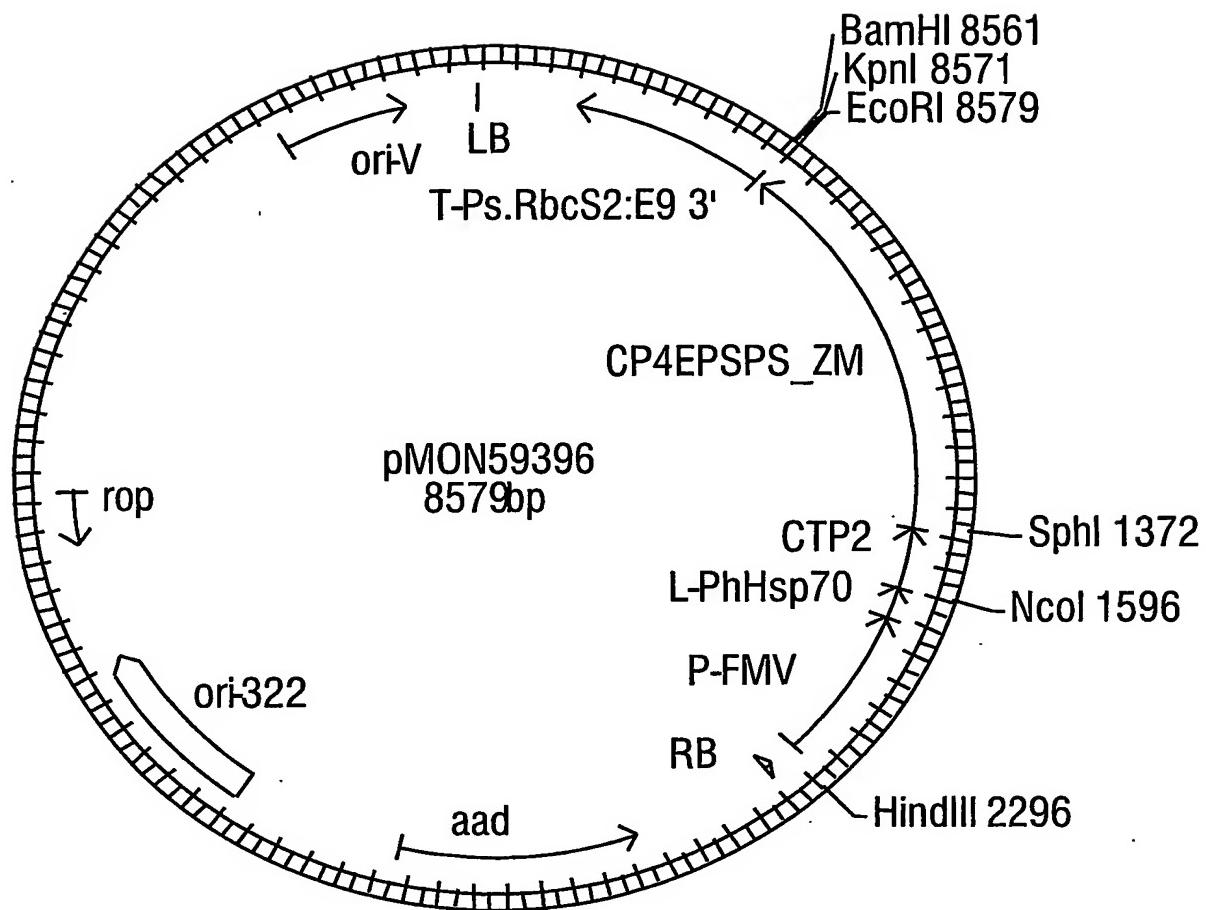


Figure 24

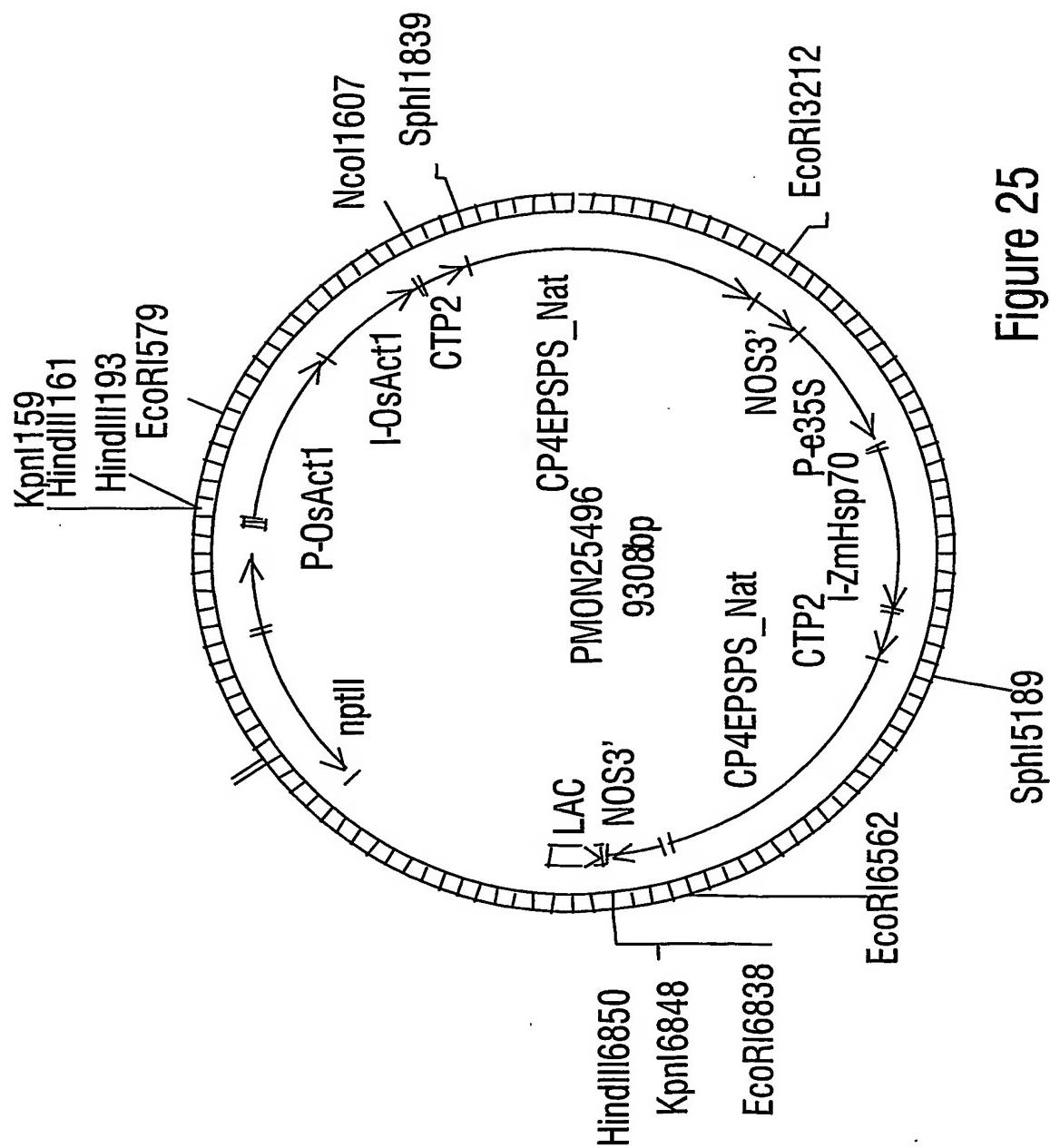


Figure 25